```
taaacacgaa gcggaaaaaa gatttgaaca tcttcaaatc ttatatggtg gagaattgta        60

ctatacaagt gatatgttag aaaaactgaa gttaaagcaa attccaactt taaacaatac       120

gaaatttgct ttaattgaat tttctatgca aacttcttgg aaagatattc atacagcttt       180

gtcaaatgtt ttaatgcttg gtattacacc agtcgttgcg catatagaga ggtataacgc       240

tttagagaat caaaaagaac gggtgaagga aattattaat atggggtgtt acacacaaat       300

aaatagttcc catattttga aacaaaaact ttttaatgat aagcataaac gctttaagaa       360

aagagcccgt tattttttag aggaaaattt agtgcatttt gtagcgagtg atatgcataa       420

ccttgatgtt agaccgccat ttttagcaga agcttataag attatctgta gagatttcgg       480

taaagaacgt gctaaccaac tttttattga                                         510
```

```
<210>   608
<211>   534
<212>   DNA
<213>   Streptococcus agalactiae

<400>   608
taatcacatt tgttgccatt gcatttgcaa cagctggact tttctatagt cttttttattg       60

ttacgccaca atatacttct tcaacaagga tatatgtcat taaccctaat acccctaata       120

atagtattac tgcacaagat ctacaagcgg ggagttttct tgcaaatgac tataaggaga       180

ttattacgtc tactgacgtt ctagaaaaag ttatttcttc tgaaaaattg aattatcctt       240

cgtctcagtt gctacaaaaa ataacagttt ctattttaaa agatacacgt gttatttcaa       300

tatcggtcga agatgctaat ccaaaaatgt ctcaaaaatt agcaaattca gttagagaag       360

cagcagtttc aaaaatcaag gcagttactc aagtagaaga tatcactact cttgagaagg       420

gaaatttacc taaagcacca tcttctccta atattaaaaa gaatgtacta atcgggttta       480

ttgttggtgc aggattatcg actattgttt tagttattat gggtattttg gatg            534
```

```
<210>   609
<211>   585
<212>   DNA
<213>   Streptococcus agalactiae

<400>   609
cgtacaaaca tacagtttag tggaaaggaa aataaaattc ttgcaattac ctctgttagg        60

gaaggggaag gaaaatccac tacttcaaca agtttagctt tatctttagc tcaagcagga       120

tttaaaacat tattaattga tgcggatact aggaactctg ttatgtctgg aacctttaaa       180
```

```
gcaactggaa ctattaaagg cttgacgaat tatttatcag gtaatgcaga tcttggagat    240

attatctgtg aaaccaatgt tcctagactg atggtcgttc cttcagggaa agtaccacca    300

aatccaacag cattacttca gaacgcttat tttaataaga tgattgaagc tattaaaaat    360

atatttgatt atattatcat cgatactcca cctattggtt tagttgttga tgccgcaata    420

atcgctagtg cttgtgatgg ctttgtttta gtaacccaag caggtagaat aaaacgtaat    480

tatgttgaaa aagcaaaaga acagatggaa caaagtggtt caaagttctt aggtattatt    540

cttaataaag ttaatgaatc tgttgctact tacggcgatt atgga                    585
```

```
<210>    610
<211>    527
<212>    DNA
<213>    Streptococcus agalactiae

<400>    610
tttggagtcg tggctatctt gaagagttta aaatggtatt gaaatacagc ttttactata     60

ttttcatatc aagttcatta ttttttatttt ttaaaaactc ttttacaacg acacgacttt    120

cctttttac ttttattgct atgaattcga ttttattata tctattgaat tcatttttaa    180

aatattatcg aaaatattct tacgctaagt tttcacgaga taccaaagtt gttttgataa    240

cgaataagga ttctttatca aaaatgacct ttaggaacaa atacgaccat aattatatcg    300

ctgtctgtat cttggactcc tctgaaaagg attgttatga tttgaaacat aactcgttaa    360

ggataataaa caaagatgct cttacttcag agttaacctg cttaactgtt gatcaagctt    420

ttattaacat acccattgaa ttatttggta aataccaaat acaagatatt attattgaca    480

ttgaagcaat gggagtgatt gtcaatgtta atgtagaggc acttagc                  527
```

```
<210>    611
<211>    360
<212>    DNA
<213>    Streptococcus agalactiae

<400>    611
tgatcaagaa gtgttcattc aaacgggtta ctcagacttt gaacctcaga attgtcagtg     60

gtcaaaattt ctctcatatg atgatatgaa ctcttacatg aaagaagctg agattgttat    120

cacacatggc ggcccagcga cgttatgtc agttatttct ttagggaaat taccagttgt    180

tgttcccagg agaaagcagt ttggtgaaca tatcaatgat catcaaatac aatttttaaa    240

ttcgattgcc cacctgtatc ccttggcttg gattgaagat gtagatggac ttgcggaagc    300
```

```
gttgaaaagg aatatagcta cagaaaaata tcagggaaat aatgatatgt tttgtcataa       360


<210>  612
<211>  384
<212>  DNA
<213>  Streptococcus agalactiae

<400>  612
tgaggtttga tgagaactta aaaattggtg aggatttact ttttaattgc aaactcttat        60

gtcaagagca ccgtatagtc gtagatacga cttcttcctt atatacttat cgaattgtaa       120

aaacttctgt aatgaatcag aaattcaacg aaaactcatt agattttata acaattttta       180

atgaaataag tagtttggtt cctgccagat tagctaatta tgttgaagcg aaatttttaa       240

gagaaaagat aaagtgtctc cgaaaaatgt ttgaattagg tagtaatatt gacaataaaa       300

tcaaagtaca acgagagatt tttttcaaag acattaaatc atacccgttc tataaagcgg       360

tcaaatactt atcattaaag ggat                                              384


<210>  613
<211>  514
<212>  DNA
<213>  Streptococcus agalactiae

<400>  613
gggttgtcag aagctagaaa ctatggaatt tatcattcaa aggggaaaata cttaactttt       60

gttgattcag atgataaagt ttcctctgat tacatagcga atttgtataa tgctattcaa       120

aaacatgatt cgtctatagc tatcggtggc tatttagaat tttatgaaag acataatagc       180

ataagaaatt atgaatattt agacaaagtg atatcagttg aagaagcact actaaacatg       240

tatgacatta aaacttatgg ttcaattttt attactgcat ggggaaaatt attccataaa       300

tctatattca atgatttaga atttgcatta aataagtatc atgaggatga gttctttaac       360

tataaagcat acttaaaagc taattctata acatacatag acaagcctct ctatcattat       420

cgtatacgag taggtagtat catgaataat agtgataatg ttataattgc tagaaagaaa       480

cttgatgttt tatcagcatt agacgagcga ataa                                   514


<210>  614
<211>  524
<212>  DNA
<213>  Streptococcus agalactiae

<400>  614
tattcttggg tggttctgtc gtaaaacgag taattaaaac ttacttattt aaaaagtatg        60
```

```
ttccgtatgg ttttttcaaaa tattgtctct caattgaggt taattctttta gtggggttac      120

ctcatgacat aaggagtaag aaatataaag aactaccgag aaaaaaatta tttgatagtc      180

ttaacaaaga acaaaaatca ctgattttca aaatatttaa aacaaaacca ttaactataa      240

ctccaaagtc agtattattg ttgacacagc cacttgcaca agataaatgt tataaaacac      300

ctacagagag gtttcaaagt attcaagagc aatacgatta ttttgacgat attgtccagg      360

aatatagaac gttagggtac aatgtttatt taaaagttca tcctagagat gtagtagatt      420

attccaaatt gccggtagag ctattaccat caaatgttcc tatggaaatt atagagttga      480

tgtcaacagg tcggttcgaa tgtgggataa cacattcgtc cact               524
```

```
<210>    615
<211>    613
<212>    DNA
<213>    Streptococcus agalactiae

<400>    615
tacactcggg aatttattgg tgcaaggatt agcctttatc acacttccca tctatactcg       60

ggttatctca acagaagttt atggccaata tagtttatat gtcgcttgga tgaatattat      120

tatgcttttt attggccttc agacgagcgg ttctttaagt tcagcccggg tcaaatacgg      180

agaagaattt aaaagctatt cagggagtgc cttttctgta ggtaatatat ggtttcttat      240

tatacttttg atagcttttc tatttagaag ttttcttgca ccattagttg gttttttctga      300

atctattttt ttattaatgg tgtgtcaaag ttacgctagc tatgtggtga ctttctttgg      360

tcagtatttt atacaacaac agaggagttt ggctaattta atattatcct tagccaatgc      420

agtttcatct gttgcactat ctctattttt aatttttcat tggtccgatg acttttttatc      480

tagggttttt ggagcttttg ttcctactat aataactgga atagttgcct ttgcttatat      540

ttattatcat agcaaatctt tttacaatcc taagtatttt cggttcattg tcactgtgtc      600

tgttcccttg att                                          613
```

```
<210>    616
<211>    451
<212>    DNA
<213>    Streptococcus agalactiae

<400>    616
tcaggactgt ttatttttat gattaaacga aacttcctct aataaatagt caataaattt       60

ttgtcccatt tttgaaaggt ttgctttgtc gtgtcggata tagacaatat caataacatc      120
```

```
atccacgtca agagggattg cgacaatttc gtcaccgttc aattttgagt tgaggatacc       180

agttgccact gtataaccat ctaatccaat cattaaatta aacagagttg ctctatcact       240

gacaacaatg gattttgggt gaggaatttg agacatcatt tcctcagaaa agtagaaaga       300

attatgcagg ccttgatcat aactcagata aggataatct tctaaatctt tcatacttaa       360

ttttttttcta ttagctaagg gattggattt gctcacgaaa atatgaggtg tagtagtaaa      420

aagagttgtg gcaattaagg aattatcgtc g                                      451
```

```
<210>    617
<211>    361
<212>    DNA
<213>    Streptococcus agalactiae

<400>    617
aaagttcgta ttgggtcatg tctgtgccat taaagagagc tacaaaagcg ttaaccacaa        60

atgcatagtg ttgtgaagaa acgctgaaca gctcacgact tgtattatca cccttataac       120

gctcttcaag aagtgctgtt tgttctagaa tttgtcgcgc atatgacaga aattccatac       180

catcttttgt taacgttatt ccttttggat ttcgaataaa aatttggata cccatctcag       240

tctcaaggtt cctaacagcg tttgaaagtg aaggttgggt aatgtagagt tgtttagcgg       300

cttcattcat gctaccagtt tctacaatct taataacata ttgtaattgt tgaattctca       360

t                                                                        361
```

```
<210>    618
<211>    383
<212>    DNA
<213>    Streptococcus agalactiae

<400>    618
cgtttcctta gggactgttt tatctgcggc gatgatttta cctattttag cctttattca        60

tactagttca gcttttacga ctcttagcac aattgtaggg acttttattg gttttatttc       120

aggagtatat ctctcaattg gctcggtagg aaaagcatta caacaggtta tgacatggtt       180

tccattgact caaatcaatt ctcttttgaa acaggtctta atgaagggtt ctattgcgaa       240

ggtatttgac aaagccaacg aagccactgt ctctaactat aaagaatcat atggtgttgt       300

tttgcgtaat gctgatggag aaaggctgag taatcacttt atgttgattt atatcattgc       360

cctcattctt attttattgg caa                                               383
```

```
<210>   619
<211>   535
<212>   DNA
<213>   Streptococcus agalactiae

<400>   619
ttacctatgg ttgtttagat tggaatagta gctttagtgg ttttctttta attgattcga      60

aaagtcgtag tggacaggca atcacttatc tatataaaac tatcttaaag aagataacaa     120

aactgaagtt ttctaatatc tataccgaaa tcagtaacta caataaaccc tccttagctt     180

tatcaaaatt gaatggcttc aaagagtatg ataagacata tgaagacata ctgcattgtc     240

gatcattgcg tagtcacctc cctaagatat tgaatacgtt tcgtatttcg aattattatg     300

gtaaaacata cgacatatca acttttcaaa ttatggagga aattgaaaat cccttggaag     360

aggagacaga aattaggacc aaagtctctg atgaagaaat attatttaaa gcagaagata     420

gtgcttcact tccttattat ttaaaaatga gcttgtttca aatggaaatt gctaagttag     480

ataaccgtta tgttttacaa gttgactttt tatcggaaca agtaaagagg gttcg          535


<210>   620
<211>   519
<212>   DNA
<213>   Streptococcus agalactiae

<400>   620
ctggtgaaga atgtgaagaa gccttagacc ttgtgattcc taagaatatt gtatttgcag      60

atacagatac ttgtggctac actttttttac tcaatgaaga tggaacagtt tatgatgatg     120

tgactttcta caaatttgat gataaaatatt ggttggctag tcataaagct ttggattctt     180

atttagacaa catcaatttt gactataccg taacagatat ttctgacgag tataaaatgc     240

tgcaaattga aggaagatat tcgggagaaa ttgctcagtc atttttatgaa tatgatattt     300

caacacttaa ttttcgtact ttgatagaga tgacttataa aggtgagaaa ggttatcttg     360

ctagatttgg tttttctgga gaatttggct atcaattttt cctaccatct tctatttttg     420

ctacttttgt ttcggatgtc tgtgaaggta tagcagagtg tggggatgaa cttgatagat     480

atttaaggtt tgaagtggga caacccatta ctgatattt                           519


<210>   621
<211>   573
<212>   DNA
<213>   Streptococcus agalactiae

<400>   621
```

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cgagcataaa cagcatctct tcgacttaaa agaaggaatt tctaaacatt tatataaaaa      60

tcacgactct attttagaat cttatacagg aagcataact agtgacccag aggttcctga     120

gcaatacaaa gatgagacac gtaattttaa atttgctttt accgcttttg aagaggctct     180

tgcttcttca ggtgttaatt taaaagctta tcataatatt gctgtgtgtt tagggacctc     240

acttggggga aagagtgctg gtcaaaatgc cttgtatcaa tttgaagaag gagagcgtca     300

agtagatgct agtttattag aaaaagcatc tgtttaccat attgctgatg aattgatggc     360

ttatcatgat attgtgggag cttcgtatgt tatttcaacc gcctgttctg caagtaataa     420

tgccgtaata ttaggaacac aattacttca agatggcgat tgtgatttag ctatttgtgg     480

tggctgtgat gagttaagtg atatttcttt agcaggcttc acatcactag gagctattaa     540

tacagaaatg gcatgtcagc cctattcttc tgg                                  573
```

```
<210>   622
<211>   610
<212>   DNA
<213>   Streptococcus agalactiae

<400>   622
tcttatcatc tgctgcttcc atttctaaga atgaatcact ttctataacc tatgaaaaag      60

ttgctagtaa tttcaacgac tttgaagcat tacgctttaa aggggctaga ccacccaaaa     120

ctgtcaaccc agcacaattt aggaaaatgg atgatttttc caaatggtt  gccgtaacaa     180

cagctcaagc actaatagaa agcaatatta atctaaaaaa acaagatact tcaaaagtag     240

gaattgtatt tacaacactt tctggaccag ttgaggttgt tgaaggtatt gaaaagcaaa     300

tcacaacaga aggatatgca catgtttctg cttcacgatt cccgtttaca gtaatgaatg     360

cagcagctgg tatgctttct atcatttta  aaataacagg tcctttatct gtcatttcga     420

caaatagtgg agcgcttgat ggtatacaat atgccaagga aatgatgcgt aacgataatc     480

tagactatgt gattcttgtt tctgctaatc agtggacaga catgagtttt atgtggtggc     540

aacaattaaa ctatgatagt caaatgtttg tcggttctga ttattgttca gcacaagtcc     600

tctctcgtca                                                            610
```

```
<210>   623
<211>   606
<212>   DNA
<213>   Streptococcus agalactiae

<400>   623
```

```
agcgatatga tgctttcttt tctctttcaa cagactttaa ttttttatca gaagaagaaa     60

ttgaacgcat ctgttctatt gaaagagact tgttacgcca agaaaaattt gatgctgtat    120

tgacaggtta ccgtctatct attgttacaa gttgtcgttt agaaagcata ccattaattt    180

ggattatttc aggggcaacg catatcagtg aaattgttga aaactcagaa ggaatattgc    240

ctaatgggaa gataagtaaa gctagtaagc ctcaaacaaa ggattttatc aaaagagtaa    300

tcactactta ttcaacaaat gttaaaacgt ggaataacta tattaaaaaa tatggtggca    360

aaccttttaa taatgcttta gaattatttta ctggtgatct aaacttggta acagattact    420

ctttgtttta tgaatttgat aaagattcgt cctataaaac gataggacct attttgatag    480

ataatgtagg ttttttcaaaa tgcagccaaa ttaatcaaga caataagact gtactgctca    540

gctttggtac ttcatttaaa cgagattggg tggaatcttt tttaaagaca ttaccaaggc    600

attatc                                                               606


<210>   624
<211>   511
<212>   DNA
<213>   Streptococcus agalactiae

<400>   624
aaaaataggc agtctacatt ggagaataat ttatctggcg atcggttgat gagatatcaa     60

caagcaaata gacaggtaag caaagataaa ctgttaacag ggagttattt tgtgtaccaa    120

tgcttaaaaa agttaggttt taccaataag atttgtcagg aatctttttc tagtgttagt    180

agttatttaa ttggtttgcc aaaggggaaa attagttact ctaattctgg tgactatcat    240

attctaacct atgctcccag tggttcaact ggggttgata ttgagaaata caaagataga    300

tcagaacaaa cctaccaaaa ctacctagga gaatcagtta gtagtgatat ggattctaaa    360

ttattatttt ataaggcatg gttacaaaaa gaaatttcct ataaatgtgg gaaatctata    420

gatattacct atcaaacaat gatagatggc tatatttatg gttatgcttt tgataatact    480

tttaaagtag aagcggttta cttaaaagaa t                                   511


<210>   625
<211>   231
<212>   DNA
<213>   Streptococcus agalactiae

<400>   625
agtaatggcc aattgttgcg gaataaccta attcttcaat taactcacga gttaaagctt     60
```

```
ctaggtgatt ttcattttct tcaatttccc cacctggaag aaaccaagca ccattaggtg    120

cctgtactaa aataatttta tcatgagttg gatttggaat aatagcatag acaccaaatc    180

gtgacctata gtttacatta tctatttttt caccgaaagt aggattagtc a             231
```

```
<210>   626
<211>   240
<212>   DNA
<213>   Streptococcus agalactiae

<400>   626
aatcccttg gcttgagaag gagttgcagt ttggttgcga ttattatttc gtccattacc     60

gtttcctcca cctcggtttc ctcctgattg tgtaggagga gtgtttggta aatcttggcc    120

attaaaggct ctgaaattat ttaaatctcc aaagaaatca tcaaagaaag gattgatgcc    180

accaggcgca tgtgaaacat gattaaaccc tgaaaaaagt ggattattag ggtcagtttt    240
```

```
<210>   627
<211>   400
<212>   DNA
<213>   Streptococcus agalactiae

<400>   627
ctattataaa gaacgagggc aaacactttt agacgttttg caaaccattt acgataaatt     60

tggctattac aacgagcgcc aattttctct tgagttagag ggtgctgagg ggcaagaacg    120

tattagtcgt attatggagg attttagaca ggacccaata ttacaagtag gtgagatgac    180

attggagaat tctattgatt tcaaggatgg ttataaggat ttttccaaagc aaaattgttt    240

aaaatattat tttaatgagg gttcatggta tgctttaagg ccgtcaggga cggaacctaa    300

gataaaatgt tacctttata cgattggttg tacagaagca gatagtttat cgaaacttaa    360

tgcaattgag tcggcttgtc gtgctaaaat gaatagtact                          400
```

```
<210>   628
<211>   628
<212>   DNA
<213>   Streptococcus agalactiae

<400>   628
ccctaaatca agccataaag gtgattatgg tagtgttctt ctgataggag gttttttatcc     60

ctatggaggt gctattataa tggcagcttt ggcctgtgtc aaaactggtg caggattagt    120

tactgtagca acccaaagtt gcaatatccc ctctttgcat agtcaactac cagaggtaat    180

ggcgtttgat agtgatgatt acaaatggtt ggaaaaatca attgttcaaa gtgatgttat    240
```

```
tgtaattggt cctggattag gagtatcaga atcatctcga aaaattttga accagaccat    300

ggagaagatt caatcacatc aaagtgtcat ccttgacgga tcagccttga ctctgttatc    360

agaaggtgcg tttccgcaaa caaaggctaa aaatttagtg ttgacacctc atcaaaaaga    420

atgggagcga ttgtcaggta tcgctgtatc gcaacagaca aaagaaaata cccaaaccgc    480

tcttaaatct tttcccaaag ggacgatttt agtcgctaag agttcgcata cgcgtatttt    540

tcaagattta gacgaaaaag aaattatagt aggaggtcct taccaggcga ctggagggat    600

gggggatact ttgtgtggta tgattgca                                      628
```

```
<210>    629
<211>    388
<212>    DNA
<213>    Streptococcus agalactiae

<400>    629
agttttatct attgacgatt taagcttgat tcatattaat aaaacgggac gcctgttagc     60

ttatcccttt gttgcagcag gtattttagc tgagaagtcg gaagaagtaa aaggaaaact    120

gcatcaagct ggccttttaa tcggtcatgc ttttcaagta cgtgatgata ttttagatgt    180

gactgctagt tttgaagaat tggggaagac accaaataaa gacattgtag cagaaaagac    240

aacttatcca aatttattgg gtttggataa gtcacaggaa atacttgatg atactttgaa    300

aaaagctcag gcaatttttc aaaatctaga gaaaaaagct aactttaatg ctagaaaaat    360

aatagatata atagagggat tacggttg                                      388
```

```
<210>    630
<211>    410
<212>    DNA
<213>    Streptococcus agalactiae

<400>    630
tgttcttaac catgctgttg aaacacaaca tgagttgtta cgcagattgg aagcttatgg     60

ggtaactcta actcaagcaa ctatttcacg tgatatgaat gaaattggca ttataaaagt    120

gccatcagca aaaggtcgct atatttacgg tttgtcaaat gaaaacgacc ctatctttac    180

aactgctgtg gcaaagccta ttaaaacaag tattttatca atatcagata agctactagg    240

tttagagcaa tttatcaata ttaatgtcat accaggtaac agtcaattaa ttaaaacctt    300

cataatgtca cattgtcaag aacatatttt tagtttgaca gctgacgata atagtctcct    360

tttgattgca aaatcagaag cagatgctga tcacattcgt caatcaatga              410
```

```
<210>    631
<211>    240
<212>    DNA
<213>    Streptococcus agalactiae

<400>    631
taatgaatga aggtgtggaa catatcattg caattcattt aacgcataca ctatcaggaa      60

ctattgaagc atcacgccag ggagctaata ttgctggtgc agatgttaca gttattgatt     120

ctacttttac agaccagtgt caaaaattcc aggttgtaga agctgcgaaa ttagctaaag     180

agggagctga tttagatacc atcttggctc gtgtggaaga agtacgccag aagtcagaat     240


<210>    632
<211>    240
<212>    DNA
<213>    Streptococcus agalactiae

<400>    632
aatgggcatt tctcttattg ttggcaatta acctttcctt cacagcagtg attgcaagtc      60

gcttaattca agtacgtgag cctaatacag gaaaaatttc gactggggta caagataaag     120

taaaagtagg tacttttacg accaataagt cgcaactgaa taagacaatt gcactttatt     180

taaaacaata tcaaactaag aagatgaatt ataagattta tgctgcttca tcttctatac     240


<210>    633
<211>    200
<212>    DNA
<213>    Streptococcus agalactiae

<400>    633
tcgaaacctt tctgaggtaa caaaggaggc tgatatcctt attgttgcga ttggtcaggg      60

gcactttgtt acaaaagact tcgttaaaga aggtgctgtg gtgattgatg ttggtatgaa     120

tcgcgatgaa aatggtaaat tgattggaga cgttgtattt gaacaagtgg cagaagttgc     180

tagtatgata acacctgttc                                                 200


<210>    634
<211>    545
<212>    DNA
<213>    Streptococcus agalactiae

<400>    634
tgaatctgga atgtttgata agaaagatat ttttgttagt acagattcag aattgtacag      60

agagatttgt ttagaacgcg gtatttcagt ggtgatgaga aaaccggaac tttcaactga     120
```

```
tcaggcaact  tcgtatgata  tgttaaaaga  ttttttatct  gactatgaag  ataatcagga        180

gtttgtgtta  cttcaagtaa  cttctccact  aagaaaatca  tggcatataa  aggaagcaat        240

ggagtattat  tcttcacatg  atgttgacaa  tgttgtaagt  ttttctgaag  ttgagaaaca        300

ccctagtctg  tttacgacat  tgtctgataa  aggctatgct  atagatatgg  tgggagcaga        360

taaaggttat  cgtcgccaag  atttacaacc  tttatactat  ccgaacggcg  ctatttttat        420

ttctaataaa  gaaacttact  taagggaaaa  aagctttttc  acctctagga  catatgctta        480

tcaaatggca  aaggaatttt  cattagatgt  tgatacgaga  gatgatttta  tccacgtcat        540

cggtc                                                                        545
```

```
<210>    635
<211>    557
<212>    DNA
<213>    Streptococcus agalactiae

<400>    635
ttattctttc  gacgggtatg  gcggtaatgg  aagagatcca  tcaagcggtg  aatattttac         60

gtcagaatgg  tacaaccgac  atttctattt  tacattgtac  aacagagtac  ccaacacctt        120

acccctctct  aaatttaaac  gttattcata  ctttgaaaga  tgaatttaaa  gatttaacga        180

taggttattc  ggatcattca  attggatcag  aagtacctat  cgcagcagca  gcaataggtg        240

cagaagttat  tgaaaaacac  tttactttag  atactaatat  ggaaggtccg  gatcataaag        300

ccagtgcaac  acctgatatt  ttagctgctt  tagttaaagg  ggttcgcatt  gttgaacaag        360

ccttaggtag  atttgaaaaa  atcccagatc  cagtagaaga  aaaaaataag  attgttgctc        420

gtaaatcagt  agttgcttta  aaaccaatta  aaaaaggcga  tatttattca  atagaaaata        480

ttacggtgaa  gcgcccaggt  aatggtattt  ctcctatgaa  ctggtatgat  atcttgggac        540

aagaagcgca  agatgat                                                          557
```

```
<210>    636
<211>    532
<212>    DNA
<213>    Streptococcus agalactiae

<400>    636
gctgaatacg  gaataatgaa  gccattgatt  caaagattat  caaaagataa  agaagtcaac         60

ttacaaatta  ttgcaacagc  aatgcatctg  gaagaaaagt  acggctatac  ttatcgtcaa        120

attgaagaag  acggttttga  tattgcttat  aaagttccct  acatctttta  tgatactgac        180
```

```
agaagaactg tatctactgc aatggcgcat ttacaactag gattgaccaa aatttttgac    240

aaggaagact atgatctagt catcatttta ggggatcgtt atgaaatgtt accagttgtg    300

aatgtagcgt tgatttataa tgtcccagta tgccaccttc atggagggga gacatcatta    360

ggcaattttg atgagtatat cgccatgca attactaaga tgagtcacct acacttagtc    420

tctacagagg attttcgtca acgtgtgatt cagatgggag aacaacctca atttgtaatt    480

aacacaggag ctctcggagt ggaaaatgct ctatcaattc ctcctctaac ca    532
```

<210> 637
<211> 507
<212> DNA
<213> Streptococcus agalactiae

<400> 637
```
agtcatgctg atgcgattgc tccggttatt gatcctcttg tgtatgattt cgtaggtttt     60

tttgatgata aagatattac ggagcatgat ggttatcctg ttcttggaaa actttatgat    120

gtgctacctt accttgaaga tggctcaata gatgcagtat ttattacaat aggtgataat    180

gctaaaagga aagaactatt tgaatatgta gcaaaggatt attatgactt tattattaac    240

atcattagtc ccaatgcttt agtattgaca ccagatagta tttgtggacg tggtatcttt    300

attggttttg gggctttat aggttctaaa gtgaagctgt ttgataacaa tgttgttaat    360

acaggagcgc tcattgaaca tcatactgtt gtagaatcac actgtaatat agcacctaac    420

gctaccataa atggtctttg ttatattaga gaagaagttt atgtaggtag tgccagtgtt    480

attattcaaa ccttggatat ttcatcg    507
```

<210> 638
<211> 510
<212> DNA
<213> Streptococcus agalactiae

<400> 638
```
gcatgaccaa gaggaactaa tgaaacctaa catgcacatt ctgatgttag atgaatttgg     60

taatacagaa tttaatgtca taaaagaacg ttatcaaagt cttttgatg cttatcgtca    120

gcttcgtaaa cgcgtattgg ataagcaaaa aaatgaacaa gagaataaat cacgtattga    180

aatgctagaa tttcaaatag cagaaattga gtctgtagcc cttaaatcag atgaagacca    240

aacgctactc aagcaacgtg ataaattaat gaatcataag aatattgcag atactttgac    300

aaatgcatat cttatgttag ataacgaaga gttttcaagt ttatcgaatg ttcgttctgc    360
```

```
aatgaatgac cttatggctt tagaagaatt tgatcgagaa tataaagatc tttccaccaa      420

tctttcagaa gcttactacg ttattgaaga agttactaaa cgtttaggtg acgttatcga      480

tgatttagat tttgacgctg gtttactaca                                      510
```

```
<210>   639
<211>   627
<212>   DNA
<213>   Streptococcus agalactiae

<400>   639
aataccttga aatgtgtcgt gattatgctc tcagccaagt tgacaaacaa cgtgatgatt       60

ttaaacgtct gggcgtttct gccgattggg aaaatcctta tattcacta acaccagatt      120

atgaagcaga tcaagtacgt gttttcggtg ctatggcaga taaaggatat atctatcgtg      180

gtgctaaacc agtgtattgg tcatggtcat cagagtctgc ccttgctgag gctgaaatcg      240

aatatcatga tattgattcg acatcactct actatgccaa taaagttaaa gatggtaagg      300

gaattcttga tacagatacc tatatcgtcg tttggacgac aacaccattt actgtaacag      360

cttcacgcgg tttaacagta ggaccagata tggagtatgt tgtagttgta ccagtaggta      420

gtgagcgtaa ataccttctt gcagaggttc ttgtagatag tctcgctgct aagtttggct      480

gggaaaactt tgaaattgtg actcatcaca ctggtaaaga acttaatcac attgttacag      540

aacatccatg ggatacagaa gtagaagagt tggttatcct tggagaccat gttacaacag      600

attctggtac aggtattgtc cacacgg                                         627
```

```
<210>   640
<211>   326
<212>   DNA
<213>   Streptococcus agalactiae

<400>   640
acatatgatg tatctatctg gaactctagt ggctggtgca ttgttatttt caccagctgt       60

attagaagta catgctgatc aagtgacaac tccacaagtg gtaaatcatg taaatagtaa      120

taatcaagcc cagcaaatgg ctcaaaagct tgatcaagat agcattcagt tgagaaatat      180

caaagataat gttcagggaa cagattatga aaaaccggtt aatgaggcta ttactagcgt      240

ggaaaaatta aagacttcat tgcgtgccaa ccctgagaca gtttatgatt tgaattctat      300

tggtagtcgt gtagaagcct taacag                                         326
```

```
<210>   641
<211>   210
<212>   DNA
<213>   Streptococcus agalactiae

<400>   641
tatacaaaat caaaacttga taaggaaatc tggaatacac gctttactag agataaaaaa        60

gtacttaacg tcaaagaatt taaagtttac aatactttaa ataaagcaat cacacatgct       120

gttggagttc agttgaatcc aaatgttacg gtacaacaag ttgatcaaga gattgtaaca       180

ttacaagcag cacttcaaac agcattaaaa                                        210


<210>   642
<211>   230
<212>   DNA
<213>   Streptococcus agalactiae

<400>   642
ggagcgcgtt tagtttacgc agtagatgta ggaacaaatc aattagtttg gaagttacgt        60

caggatcatc gtgttcgttc tatggaacaa tataatttta ggtatgccca aaaagaagat       120

ttcaaggagg gactgcctga atttgcatcg atagatgtct catttatctc tcttaatttg       180

attttaccag ctctaaaaga aattttagtg gatggtggac aagtagtggc                  230


<210>   643
<211>   522
<212>   DNA
<213>   Streptococcus agalactiae

<400>   643
ctagggaatg gtctgcttgg attgataaag aaaatactgc tgataaatca cctattatcc        60

aacgtaccga acaaggccaa gtaagtctat ccagcgacaa aggctttaga ggtgctgtaa       120

cacaaaaagt gaacattgat cccactaaaa aatatgaggt caagtttgat attgaaacaa       180

gtaacaaggc tggacaagct ttccttcgta ttatggagaa aaaagataac aatacgcgac       240

tttggctttc tgagatgacc agcggtacta ctaacaaaca taccttaaca aagatatata       300

acccaaagtt agatgtctcc gaggtgacac ttgaacttta ttatgaaaaa ggaacaggtt       360

ctgttacttt tgataatata tcaatgaaag caaaaggccc taaagactca gagcatccac       420

aacccgtcac aacacaaatt gaaaaaagcg ttaatacggc tttaaacaaa aattacgttt       480

ttaataaagc tgactaccaa tacactctaa ccaatccgtc tc                         522


<210>   644
```

<211>   586
<212>   DNA
<213>   Streptococcus agalactiae

<400>   644
tcccacttaa ctatgttgct cttggagatt ctctgaccga aggtgtgggc gatacaacct   60

ctcaaggtgg ttttgttcca ctgctatcag aatcactcca taatcgatac tcttaccaag   120

tgacttctgt taattatggt gtgtctggga atactagtca acaaatttta aaacgtatga   180

cgacagatcc tcaaatcgaa aaagatttag agaaagctga tttattgacg ctaactgttg   240

gtggtaatga tgtcttggct gttattcgta aagagctcag tcatttatca ctaaattcct   300

ttgagaaacc agcagaagca tataaggaac gtttgaaaga aatccttgca aaagcaagac   360

aagataatcc taaattgcct atttatgttt taggcatttta taatcctttt tacctaaact   420

ttccacaatt aactaaaatg caaaccgtta ttgataattg gaataaagct acaaaagaag   480

tagttgatgc ttcagaaaat gtttattttg tcccaattaa tgaccgcctt tataagggaa   540

taaatggtaa agagggtatt acagagtcat caaatagtca ggcaag   586

<210>   645
<211>   511
<212>   DNA
<213>   Streptococcus pyogenes

<400>   645
tagctcatat tgtcgcaaag acaagtgttg ctattgcttt ggctggagca atgggtagca   60

gtttattagc taatagcaca acgtacgctg ttagtggcaa agaaaataaa aaaagcgatg   120

tcaaatatga aacgaccaaa gttatggaag ctaacgcaac ttcctctaaa gaagacaatc   180

atgtcatgca cacattagac ggctcaatga gtactgtctg ggaggaaaat tcacctggtg   240

gtggtgttgg tgaggtactt tcctacaagt ttgcgtcccc gatgcatatt gggagaattt   300

taattgttaa tggagacaca tctagcaagg agaattacta caagaaaaat agaattgcaa   360

aggctgatgt taaatactat aacgggaata aattggtcct ctttcaaaaa attgaattag   420

gcgacaccta cactaaaaaa ccgcatcaca ttgagattga taaaaaatta gatgttgatc   480

gtattgatat tgaggtaaca gaggtccatc a   511

<210>   646
<211>   300
<212>   DNA
<213>   Streptococcus pyogenes

<400>   646
ttaaatacgc taaagccctc ttgagggctt ttttagatac aattgacatc ttaaaatgga   60

taccagtttc tgtgaaacaa tctttgattg tgaacaaaca aagcataatt tagagtatta   120

aaatctggac cctgctatct atggtaagtc tttttgttat tgttaaagag gttaagcgga   180

atgttaatat gttttagcta aaaaatgtag tgaaaaatga gtacgtagac tattgtaata   240

gtaattccgt aaaattgttg aaaaagaaaa tgggaaatac cttgtcaaat taagcaccct   300

<210>   647
<211>   579
<212>   DNA
<213>   Streptococcus pyogenes

<400>   647
ccggttatgt taatggaaag agaaaatata ttaggcgaga aggtttcaaa actaagcagg   60

ctgcaaggga aaccttaatt agtttacaag ctgaacttga taaacctaaa tcaagtatga   120

catttggagc attgacagat caatggctaa aggaatatga aaaaaccgtt caggcagta   180

cctacttaaa aacagaaaga aatattaata aacatatttt gccaaaactt gataaagtga   240

agattggaga catcaatcca ctacttatcc agcggcttac tgaagaatgg tgcaacgatt   300

taaaatatgg aggaaaaatt cttgggcttg ttaggaatat cttaaatcta gctgttagat   360

acggatatat caataacaat ccagctttgc caattacacc tccaaaaata aaaaggaaaa   420

gaaaaatgaa taataatttt tatacacttg atcaacttaa acaattcctt gaactagttg   480

aaaaaactga caacattgaa aaaatagcct tgtttagatt attagcattt actggaatac   540

gaaaggggga gcttctggca ctaacttggg atgatttga   579

<210>   648
<211>   507
<212>   DNA
<213>   Streptococcus pyogenes

<400>   648
gctatttggc cctgtgtagc aaaaaagtgc ctcatcatgt gcggagtaaa atgaacgtcg   60

caattttat taatttttttt aaataagcag tagatgtaat ggctaccgat tggttttcct   120

acaaaagatg gctttacttt ttcgtcgtct cctaaaaata ggaaatcagc cttatttaag   180

atgcgatcgt tgcacacggc tattttgata gaagtatcaa tagctttttt tagcagttgt   240

gatgtctcaa aatctaaata cacatatcgt tccgaataag ctgtctttag gcctccgcca   300

tcttttctac ctcttgtcct tgattcgtct atctttacga ccgcacaatc tttatcatta   360

```
aaagttatat tccctaattt tatgccagct acctcgcttc tacgcaatcc aagatatgtt      420

atcctaacca ttgcgtagtc ataatcatca agcatttttc tggcaacttt atcccaagct      480

ttaaattctt gcattgatct acgtttg                                          507
```

```
<210>    649
<211>    501
<212>    DNA
<213>    Streptococcus pyogenes

<400>    649
gctcacggtc actaataatc tctactgggc gtgcgatatg gctggcaatt tcttttgaaa       60

tatcttctgg atcctcgaaa ttagggtcat cagcagtgag aatgacggtg aggtttggat      120

gctgatgaat caccctacca aaatcagctc gtctgctctc gcctttattt cctggtgcac      180

ctaaaatcaa cattaatttg cctgtctgat gttcttccac aacgctgagt aatttttcta      240

agctgtcacc attatgggca taatcaacaa aaactttagc atgatttgtc atagtgagga      300

cttccatacg gcctgggacg cgagtcttag cgataccttt ttgaatatca gctaggctag      360

cacccaaacg aaggcaggca agtccagctg ccatagcatt ttcttggtta aaatggccaa      420

ttaattgaat gtcataatgg ccagctaatt gtcctttagc ttcaaaggag aaggcttggc      480

tagtggtgat ctggttgtca g                                                501
```

```
<210>    650
<211>    632
<212>    DNA
<213>    Streptococcus pyogenes

<400>    650
cccagttcaa ttagattacc ctgttgacca agcaaacgca gcaactgttc aggaagccca       60

gtctttcaaa caatctgttg aagcatctct tggtaaagaa aatgtcattg tcaatgttct      120

tgaaacagaa acatcaactc acgaagccca aggcttctat gctgagaccc agaacaaca      180

agactacgat atcatttcat catggtgggg accagactac caagatccac ggacctacct      240

tgacatcatg agtccagtag gtggtggatc tgttatccca aaacttggaa tccaagcagg      300

tccaaataag gatgttgtgg cagctgcagg ccttgatact taccaaactc ttcttgatga      360

agcagcagca attacagacg acaacgatgc gcgctataaa gcttacgcaa aagcacaagc      420

ctaccttaca gataatgccg tagatattcc agttgtggca ttgggtggca ctccacgagt      480

tactaaagcc gttccatttta gcggggggctt ctcttgggca gggtctaaag gtcctctagc      540
```

```
atataaagga atgaaacttc aagacaaacc tgtcacagca aaacaatacg aaaaagcaaa      600

agaaaaatgg atgaaagcaa aggctaagtc aa                                     632
```

```
<210>  651
<211>  534
<212>  DNA
<213>  Streptococcus pyogenes

<400>  651
tttgatggtg ttgggtatgg ggcacgtaat tctattttaa tctcagttat agcgaccta       60

attaatatca ccattggggt agtgttagga gccatatggg gagtttctaa agcatttgat      120

aaagttatga ttgaaattta taacattatc tcaaatatcc cttctatgct tattatcatt      180

gttttgacct attcattagg tgcaggattt tggaatttga ttctagcttt ctgtatcact      240

ggatggattg gtgtcgccta ctccatccgt gttcaaatct tgcgttaccg tgatttagaa      300

tacaaccttg ctagtcaaac tttgggaaca ccaatgtaca agattgctgt taagaacctc      360

ctgcctcaat tggtttcagt tatcatgact atgttgtcac aaatgctacc agtttatgta      420

tcttctgaga ccttcttatc cttctttggg attggtttac caaccaccac tccaagttta      480

ggacgtttga ttgctaatta ttcaagcaac ttaacaacaa atgcctacct cttt            534
```

```
<210>  652
<211>  340
<212>  DNA
<213>  Streptococcus pyogenes

<400>  652
tcgaagagat tttctatgat ccaagacacc cctatacatg gagtttgctg tctagcttac       60

cgcagttggc agatgaatct ggtgaacttt acgctattcc aggaacgcct ccatcacttt      120

attcaccaat tatcggagat gcctttgcac ttcgctcaga atatgctatg gttttagact      180

ttgaaaaagc acctccggcg attaacgtat ctgagactca ttgggccaaa acatggcttt      240

tacacccaga ggctccaaaa gttcaaaaac cagaagtcat tcaaggtttg catcaaaaaa      300

tcttaaggaa aatgtcacaa caggaggaag gaaatgtctg                            340
```

```
<210>  653
<211>  542
<212>  DNA
<213>  Streptococcus pyogenes

<400>  653
```

```
caccagacaa cctttctttc aagaccttat caattatctc gaccagcatg atcacgttat      60

attacgagag atcaaaaaag cctttcctaa tgtgacaggt attgacaagg ccatcgaaag     120

ctatgttcaa gctggctata ttcgccgtga aaataagcgt tatggcatca atcttccttt     180

ggtgagttct gatcagcagc tggccttaga cactatgctt tttgtggaca cctgttcagc     240

tatgtatgaa aatatttttag cggttgtttt tgagactcag ctaacaaacc aaaccaatcg     300

cgtgatgatc aaggaaaaga ccaacatcac gagagacgat ttgaccctgg ctaattattt     360

ttaccgtctc aaaagaggtg agaagccatc agctgagcag atggacttgt atgacctctt     420

gggggatgtg aatcaggaat atgcccttaa atatatgaca acttttttgc ttaaattcac     480

gcgcaaagac tttgtgatgc aaaaacgtcc tgatatattt gtggaagctc tggttacact     540

tg                                                                    542


<210>   654
<211>   616
<212>   DNA
<213>   Streptococcus pyogenes

<400>   654
ttaattgcag tagcagcatc tattggtggt gtaggtattg ccttgttaac tgaaaattat      60

gtcaaaaaag acatgaaagc agctgctcgt ttaatcatta caacattga aatgttagtg     120

atgttttttgt tacctgctct tactggggca attattttag caagacctct atattctgtt     180

ttttacggag ctagcgagga gcgtgccatt cacctctttg tggcggttct ctttcaaacc     240

ttgctactgg cgctttacac cctcttttca ccgatgcttc aagctctttt tgaaaatcga     300

aaagcgattt actactttgc ctatggtatc ttgattaagt tagttttaca gataccgctt     360

atttatttgc tacatgctta tggtcccttta ctagcgacga cgattgcttt agtggtgccg     420

atttatttga tgtatcgacg cctatatcag gttactcatt ttaaccgcaa actgttgcaa     480

aaacgtttat tattaacctt aattgaaacc ttattaatgg gactggtcgt gtttgtggcc     540

aactggctat tgggctatgc ctttaaaccg acaggccgct tgaccagcct tctttacctc     600

ctcattattg gtggct                                                     616


<210>   655
<211>   208
<212>   DNA
<213>   Streptococcus pyogenes

<400>   655
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```
agcagtaatc tttggtactg ttttgggtca tgttctatgt gtcccaattc atgcaagatt        60

acttttttcc tgtctttttc agacaggttt ttattaacat agattattcg atgatcagga       120

taataaaatc ctgacctatc ccacattgtg tctgggaact caaatagttt tatgttgtac       180

tgattaagta tctcatctat cttcacca                                          208


<210>    656
<211>    230
<212>    DNA
<213>    Streptococcus pyogenes

<400>    656
ttatctgatt taggacattt atcaaatgaa gatggagcgg gagccatgat tagaagcctg        60

gggtacaata ccaaaaaaat atacctaggt catctgagta aagaaaataa catcaaagag       120

ttagcgcata tgacgatggt caatcaactg gctatggcag atttagcagt aggtacagac       180

tttacggtcc atgataccatc tccagatact gcttgtccat taactgatat                 230


<210>    657
<211>    411
<212>    DNA
<213>    Streptococcus pyogenes

<400>    657
cacgagaagt tcatttcaat ctttatttaa ttgaactgat gagccttttt tagaaagtta        60

tcatgaaacg attacgtcca tatgtgaaag ggtacctaaa agaaagtatc ttaggtcctc       120

tttttaaatt attagaagct ttatttgaat tattagtccc tttgttaatt gctaacatga       180

ttgatatatc gattagtcaa cacaacagcc agggaatttt gagggttgtt ttaacattat       240

ttggtttagc aaccattggc ttattgcttt ccgttacagc ccagtatttt tcttcgaaag       300

cagctgttgg ttttacaaga caaatgacag atgatttgtt taaaaaaatc atgtttttga       360

gcaaggagga ccaagaccat cttggttatg ctagtctgtt atcacgattg a               411


<210>    658
<211>    660
<212>    DNA
<213>    Streptococcus pyogenes

<400>    658
aagaaatgga gcaaacaaac aaggagcttt tgaaatcaag aaaaataaaa gtcaagaaga        60

atataattat gaagtttatg ataacagaaa catacttcag gatggggaac ataaacttga       120

aataaaaaga gttgatggga caggtaaaac ttatcaaggt ttttgctttc agttaacgaa       180
```

```
aaattttccc actgctcaag gtgtaagtaa aaagctgtat aaaaaattga gtagtagtga      240

tgaagaaaca ctaaagcaat atgcctctaa atatacaagt aataggagag gagatactag      300

tggtaatctt aaaaagcaaa ttgctaaggt tctgacagaa ggttacccaa ctaacaaaag      360

tgattggtta aatggattga ctgaaaacga aaaaatagaa gtaacccagg atgcaatttg      420

gtattttaca gaaacgacag ttccggctga tagaagttat acgaatcgca acgtaaatag      480

tcaaaaaatg aaagaagtgt atcaaaagct aattgataca acagatatag ataaatatga      540

agatgtacaa tttgatttat ttgtgccaca agatacaaac ttacaggcag taattagtgt      600

agagcctgtt atcgaaagcc ttccttggac atcgttgaag ccaatagccc agaaggatat      660
```

```
<210>   659
<211>   410
<212>   DNA
<213>   Streptococcus pyogenes

<400>   659
aacaggttga tcagcatagg ccatgacatt ggtggcttgc atagcccaat gaatggcttt       60

tttgtcagct ggactaagat ttccaaagta agattgatgg ggaaaacgtc cgtaagaaac      120

caattcgtaa acagttatgc cgttagttgc ttcttgaact tgaggtaaaa gagctagttt      180

tttagcaacc tctttagttt ctaatgtggc aatgttttgc ccatttaaat atacaactcc      240

ctgttttggt ggtaataatc ttgtcagtgc ttttaataaa ctagacttcc cacagccatt      300

ggcgccaata atggtcgtaa ttttaccttc aggaatataa aacgataatt tatcgatgat      360

ggtacgctgt tcataggcaa ttgtgaggtc ttcagcacta attgttgtca                 410
```

```
<210>   660
<211>   718
<212>   DNA
<213>   Streptococcus pyogenes

<400>   660
tcaacccata ccattgaaac tagcgccaga aactgcacaa agcggcaaaa ggtatcggta       60

atgatgaggt gtaaatgttt catcaagatg aggaatgact aagccgataa aagaaatgct      120

tccagcaatg gctacagctg ctgatgataa aataagaacc aaaatcataa agactgcact      180

gatcaagttg gtttttttgcc caagagcttt tgcctgagac tcacttagac taaggacggt      240

caggtgataa gataatagct gggctaaaca aagactaaga ataataagag gagcaatata      300

gccgatcatt tgccaattga ccccgacaag acctcctgct tgccagccga taacagcatt      360
```

```
tgccagatga tagtaattgg taataccttg acctaatgct gatagcagta tggaaaccat    420

agctcctgct aagacaaggc ggagctgatg gtagcctttg ccagattgat aagaaaggcc    480

aaagactaag gttgctgcca ggctagaccc taacaacgaa agcagaataa tgagggaata    540

gtgcaagtga ggtacaaacg cataagccag taccaaggct agtcctgctc cagcattaat    600

gcctaaaagg ccaggctcag cgataggatt acgtgtgatt gcttgcatga tagttccaga    660

aacagctaac gcagagccag ttaaggtagc accaaaaagt ctcggtaatc gtatagcg      718
```

```
<210>    661
<211>    574
<212>    DNA
<213>    Streptococcus pyogenes

<400>    661
gcaacgacga cataatcacc aatatagtct ggcaagactt cctgcgacaa tgacaggtaa     60

ccttgtttaa aaacttcagt cttcactttt tcaggagcat cataatggaa agcttgatgg    120

ataatctctc cgccacgtcc ccagtcttta ccaaaaaggt aaacgtcttt ttcataaagc    180

cccataatag taaaggttgc tttgtcacct gtaacggcct tgacttcttt ttcataagct    240

gctgttttag ttttccaatc ttttaaccac ttcttggctt tgtcttcttt gttaaagatg    300

cggccgaagt cagataacac ttgtaaataa tcacgtttgc ggtattcaat cgagataaca    360

ggcgcaattt ctgccaattg tttaatattt tcttctgtag agccaacaac aatgaggtca    420

ggcttaagcg ttgtaacggc ttctaaatca gttgcagcaa cttgctttgc ttttttttaca    480

gtctttgcta agatggggtt tttcttgtca taagaagtaa ccccgactag attcatatct    540

aattttttga ggtaaccagt gtaagttgaa gcca                                574
```

```
<210>    662
<211>    545
<212>    DNA
<213>    Streptococcus pyogenes

<400>    662
tctggatatt actgccaacc agatagactc gtcctactgt atctgcaaca agaagtagga     60

tcattccgat taaaatacta atgggtattg ttattttatg attactccct accaagtatg    120

tactaaagtg tccagctatt aagccgataa aactaatatt accaaccaaa agaacactca    180

aagcacctaa gccagctgct aagacaagta tcaaacgacg cttacggttt aaagggagtc    240

ctagcccaat agcagtatta tcagctaatc ccataatatt aaggaaatgg gcttgactat    300
```

```
aagtcaatag ccaaaaacac aataacaaag gagcgatgac actcagagta ggccagtcgt    360

ctcctattaa ttggccgcta agccaattga tgaccaaatc gactttgtag cgattaatat    420

gaccaacaag agcaaccatt agacttgaaa gcatggtagt aacagctaca ccagtaagaa    480

ttaaccgtgt aggatcaatt tgtccttgtt ttgtcaaaga tagccaataa acgctaaagg    540

ttgtt                                                                545


<210>   663
<211>   647
<212>   DNA
<213>   Streptococcus pyogenes

<400>   663
cggtaatgtg cttatagatg gcttatcgca attaattcct attattcaaa aaacaaaatc     60

tcctatagaa gcggataaaa tggctactat ttatcattgg attaaccatt cttttttccc    120

tatcatcgtt cgtggagaaa tgatggatat gactcgaggg cgttctatca gtcgttttaa    180

tgctcaatct catgttgctg gcattgaagc acttcgtgct attttacgta ttgctgacat    240

gtctgaagag cctcaccgtt tggcacttaa aacacgtata aaaacactcg tcacacaagg    300

gaatgttttt tacaatgtct atgataattt gaaaacctat cacgatatca aacttatgaa    360

agagctacta agtgatactt ctgttccagt ccaaaaactt gatagttacg tagctagttt    420

caatagtatg gataaattgg cactatataa taataaacac gattttgctt ttggcctatc    480

catgttttcg aatcgaactc aaaattatga agctatgaat aatgaaaatc ttcatggctg    540

gtttacttct gatggaatgt tttacctata caataacgat ttaggacact acagtgaaaa    600

ctattgggca acggtaaatc cctaccgctt acctggaacc acagaaa                  647


<210>   664
<211>   585
<212>   DNA
<213>   Streptococcus pyogenes

<400>   664
cttactggtc ccaaaggtcc taaaggagac actggtctcc aaggtaaaac tggaggaact     60

ggtcctcggg gccctgctgg caagcctgga acgacagatt atgatcaact ccaaaataaa    120

ccagatctag gtgcgtttgc acaaaaagaa gaaactaata gtaaaatcac caaattagaa    180

tcaagcaaag cagataaaag cgctgtttac tcaaaagcag agtcaaaaat agagctagac    240

aaaaaattga gcttaacagg cggcatagtg acaggacaac tacagtttaa acctaataaa    300
```

```
agtggtatta aaccctcatc ttccgtagga ggagcgatta acattgatat gtctaaatcg      360

gaaggtgctg ctatggtgat gtatacaaat aaagatacta ctgatggacc attgatgatt      420

ttacgttctg acaaagatac gtttgatcag tcagctcaat ttgtggatta cagcggtaag      480

actaatgctg taaatattgt aatgcgccag ccaagcgcac ctaattttc ctcggcactt       540

aatataacca gtgccaacga aggcggtagt gcgatgcaaa ttaga                      585
```

```
<210>   665
<211>   537
<212>   DNA
<213>   Streptococcus pyogenes

<400>   665
aatctactga ctaacaagcc aaatattgat ggattagcga caaaagtcga gaccgctcag       60

aaactacaac aaaaagcaga taaagagacc gtctatacaa aagctgaatc gaagcaagag      120

cttgacaaga aattaaatct caaaggtggc gttatgacag gtcaactaaa atttaagcca      180

gccgccactg ttgcttattc ctcgtcaacg ggtggagcgg tcaatattga cttgtcgtct      240

accagaggtg ctggtgttgt tgtctattct gacaatgata ccagtgatgg gccgttaatg      300

agcttgcgga cgggtaaaga gacctttaat caatcggcgc ttttgtcga ctataagggg       360

acaacaaatg ccgttaatat tgcgatgcgt cacgcaacca cccccaattt ttcatcggcg      420

cttaatatta ctagcggcaa tgaaaatggt agtgcaatgc agctacgagg gtcagaaaaa      480

gcgctaggaa cgctaaaaat tactcatgag aacccaagta ttggagcgga ttatgat        537
```

```
<210>   666
<211>   516
<212>   DNA
<213>   Streptococcus pyogenes

<400>   666
tttcaacgta tgggttatgt caattatttt tcaagcaaag aattaaaaga taatgcttct       60

aaagtagata gtagtgtaac gacagaagca actagtgcta acaaagctgt ctatgagaag      120

tatattgatt ctcttggcaa tggctggcag gtaaaacgct tccccactag caaacaggtt      180

tatgcaattc gcaatattcc tatttacgaa cgtgtttgga actttttctc aaatctagtt      240

ggtattgatc acccttggaa gattcaggat aaagataatc caaaattagc taggtatatt      300

cgcctagaaa aagataaatc aggtggctgg tcacttgttg ggtcggggac aaaacataaa      360

tatctcctct atactaacgg aaaatttcct tatcttcacc aaaactttgt taccctaaac      420
```

```
ttaggaacat cttatccaac atacagcaat attcctgttc ttcaggttat ttcacaaggg      480

caaggacgaa cagctcttca agatgtgacc ttccca                                516
```

```
<210>    667
<211>    604
<212>    DNA
<213>    Streptococcus pyogenes

<400>    667
tctcactagg caaacctatt atcgttttat taaaaataat cttgacattt cttcgaaaaa       60

gttactttat atcttagaca acttgaatgt caatgttgat gagtttctct ttattagtaa      120

taactttaaa caatataaag aatttattga tatggatacg gcaaaacatt attttgaatg      180

ccgaaacata gaaggtttaa atcatatcct tgattcttat aaagatagta agtcaacaaa      240

ggaaaagaac cttttttgcct tggtcaaggt gttattagca actcttactg aggaagactg      300

tctgacagag cggacttatt tgtcaaacta tcttattaat attgagactt ggagtcacta      360

tgagactgtg ctttttaata attgtatgtt tattttagag tcttgcttta ttgagatggt      420

gttttcaaaa gttattgtga acctcgataa atacaatacc ctaaggtatt atgggaatga      480

atcgattcgg atgtttgtca atatgttgat tttgtttatt cagcgacaag agtatgataa      540

agcttctgag attttggcaa aaattgaaga ttatcagcta aatgatgatt gcttatatga      600

acgg                                                                   604
```

```
<210>    668
<211>    522
<212>    DNA
<213>    Streptococcus pyogenes

<400>    668
cagacgatca gcaagataaa gaaatgcctg ttcttttcaac aaaccgtttt gagccaaaca       60

aggcttacga ctatgcttat gctaatcgtg ggatgaaaga ggatgatttt aaggatgtca      120

aaggcaagat tgcccttatt gaacgtggcg atattgattt caaagataag gttgcaaacg      180

ctaaaaaagc tggtgctgta ggggtcttga tctatgacaa tcaggacaag ggcttcccga      240

ttgaattgcc aaatgttgat cagatgcctg cggcctttat cagtcgaaaa gacggtctct      300

tattaaaaga caatccccaa aaaaccatca ccttcaatgc gacacctaag gtattgccaa      360

cagcaagtgg caccaaacta gccgcttct caagctgggg tctgacagct gacggcaata      420

ttaagccaga tattgcagca cccggccaag atattttgtc atcagtggct aacaacaagt      480
```

```
atgccaaact ttctggaact agtatgtctg cgccattagt ag              522


<210>  669
<211>  554
<212>  DNA
<213>  Streptococcus pyogenes

<400>  669
cagaaaccac aacgacaagt gagcaaccaa aaccagaaag tagtgagcta actatcgaaa      60

aagcaggtca gaaaatggat gatatgctta actctaacga tatgattaag cttgctccca     120

aagaaatgcc actagaatct gcagaaaaag aagaaaaaaa gtcagaagac aaaaaaaaga     180

gcgaagaaga tcacactgaa gaaatcaatg acaagattta ttcactaaat tataatgagc     240

ttgaagtact tgctaaaaat ggtgaaacca ttgaaaattt tgttcctaaa gaaggcgtta     300

agaaagctga taaatttatt gtcattgaaa gaaagaaaaa aaatatcaac actacaccag     360

tcgatatttc cattattgac tctgtcactg ataggaccta tccagcagcc cttcagctgg     420

ctaataaagg ttttaccgaa aacaaaccag acgcggtagt caccaagcga aacccacaaa     480

aaatccatat tgatttacca ggtatgggag acaaagcaac ggttgaggtc aatgaccta     540

cctatgccaa tgtt                                               554


<210>  670
<211>  518
<212>  DNA
<213>  Streptococcus pyogenes

<400>  670
agtgactaag aaacttgatg ttagagatgc tagagatttt tttattaact ccgaaatgga      60

cgaatatgca gccaatgatt ttaaagatgg agataaaata gctgtgttct ccgtcccatt     120

tgattggaac tacttgtcag aaggaaaagt cacagcatat acgtacggcg gaataacacc     180

ctaccaaaaa acttcaatac ctaaaaatat ccctgttaat ttatggatta atggaaagca     240

gatctctgtt ccttacaacg aaatatcaac taacaaaaca acagttacag ctcaagaaat     300

tgatctaaag gttagaaaat ttttaatagc acaacatcaa ttatattctt ctggttctag     360

ctacaaaagt ggtaaattag tttttcatac aaatgataat tcagataaat attctttcga     420

tcttttctat acaggatata gagataaaga aagtattttt aaagtataca aagacaataa     480

atctttcaat atagataaaa ttgggcattt agatatag                     518
```

```
<210>  671
<211>  612
<212>  DNA
<213>  Streptococcus pyogenes

<400>  671
ttatctgtag ggctcgtctc cgtcggaacg atgctgatag ccccgacagt tttaggacag     60

gaggttagtg ctagtagtag tacggagagc agtaccacta cagctaatac tggtaccggt    120

acggcaagtg ggatgactgc cactactcct agtgctacga cagatactgg tgaagcagct    180

gggagcggag ctaggagtga agctaatggt gcatcgtccg tagtatctag cgaagaaagt    240

cagagttcag gcactactcc agcctcaccc caagcacaga cagctccagc agcaacgtca    300

acatcatcgg tttcttctag taatgagaaa actcccaaga cagcaactac aactacatca    360

tcgactccag tagcaagtac cagtaataat agcaacaaag taactagtac tgaagctgaa    420

acacagacgg tggacgtgga acggtataca gttgataagg aaaattcaaa gctaaatatt    480

aaagacggta agactccaaa aactaggagt agtgttaata aagacacaaa acttattaga    540

aaccgcgatg acaaacagcg tgatatcgtt gatgttactc ggacagttga aactaacgaa    600

gatggcctat tg                                                        612


<210>  672
<211>  500
<212>  DNA
<213>  Streptococcus pyogenes

<400>  672
gtactagaca tggccgaaaa agtgggaata agtttaccta gtagtctgaa gtcggcagtg     60

aaagtccttg gcttaactaa tagtgcaata ggttctattt tagggaaagg tttgacagag    120

taccttggtt tgacagaata tagttcagat aacttagatg gaggagggtt tgattatagt    180

aaacgtgtag gggaaggtta ctactaccac agtttatcag ataggaaata tgaaaataca    240

atgccccttg aagaagctat caggacggcc ttagcatcta attttcccaa actcacagat    300

aattggtttt tcgatatctt aaatagtttt gtcaataaag atacagttga gaaagctaaa    360

ttagacgtaa ttatgaaggt acttaatagt attttttaca aaaaagaata tcgctattac    420

aaccataacc tgtcagcaat agccgaagct aaaatggctc aacaagaggg cattaccttc    480

tattccgttg atgttactga                                                500


<210>  673
<211>  568
```

```
<212>    DNA
<213>    Streptococcus pyogenes

<400>    673
tccaagccaa cttcacagat ctagtttagt taaaaacctt caaaatatat attttctttta       60

tgagggtgac cctgttactc acgagaatgt gaaatctgtt gatcaacttt tatctcacga      120

tttaatatat aatgtttcag ggccaaatta tgataaatta aaaactgaac ttaagaacca      180

agagatggca actttatttta aggataaaaa cgttgatatt tatggtgtag aatattacca      240

tctctgttat ttatgtgaaa atgcagaaag gagtgcatgt atctacggag gggtaacaaa      300

tcatgaaggg aatcatttag aaattcctaa aaagatagtc gttaaagtat caatcgatgg      360

tatccaaagc ctatcatttg atattgaaac aaataaaaaa atggtaactg ctcaagaatt      420

agactataaa gttagaaaat atcttacaga taataagcaa ctatatacta atggaccttc      480

taaatatgaa actggatata taaagttcat acctaagaat aaagaaagtt tttggtttga      540

ttttttccct gaaccagaat ttactcaa                                         568


<210>    674
<211>    597
<212>    DNA
<213>    Streptococcus pyogenes

<400>    674
agcattaggt ggatttgttc ttgctaaccc agtatttgcc gatcaaaact ttgctcgtaa       60

cgaaaaagaa gcaaaagata gcgctatcac atttatccaa aaatcagcag ctatcaaagc      120

aggtgcacga agcgcagaag atattaagct tgacaaagtt aacttaggtg gagaactttc      180

tggctctaat atgtatgttt acaatatttc tactggagga tttgttatcg tttcaggaga      240

taaacgttct ccagaaattc taggatactc taccagcgga tcatttgacg ctaacggtaa      300

agaaaacatt gcttccttca tggaaagtta tgtcgaacaa atcaaagaaa acaaaaaatt      360

agacactact tatgctggta ccgctgagat taaacaacca gttgttaaat ctctccttga      420

ttcaaaaggc attcattaca atcaaggtaa cccttacaac ctattgacac ctgttattga      480

aaaagtaaaa ccaggtgaac aatcttttgt aggtcaacat gcagctacag gatgtgttgc      540

tactgcaact gctcaaatta tgaaatatca taattaccct aacaaagggt tgaaaga        597


<210>    675
<211>    553
<212>    DNA
<213>    Streptococcus pyogenes
```

```
<400>  675
tcatactgat ttctacttat ttcacctatc atcaaagtga ctctaagaaa gacatttcga       60

atgttaaaag tgatttactt tatgcataca ctataactcc ttatgattat aaagattgca      120

gggtaaattt ttcaacgaca cacacattaa acattgatac tcaaaaatat agagggaaag      180

actattatat tagttccgaa atgtcttatg aggcctctca aaaatttaaa cgagatgatc      240

atgtagatgt ttttggatta ttttatattc ttaattctca caccggtgag tacatctatg      300

gaggaattac gcctgctcaa aataataaag taaatcataa attattggga aatctattta      360

tttcgggaga atctcaacag aacttaaata acaagattat tctagaaaag gatatcgtaa      420

ctttccagga aattgacttt aaaatcagaa aataccttat ggataattat aaaatttatg      480

acgctacttc tccttatgta agcggcagaa tcgaaattgg cacaaaagat gggaaacatg      540

agcaaataga ctt                                                          553


<210>  676
<211>  504
<212>  DNA
<213>  Streptococcus pyogenes

<400>  676
ataatctttc atgggtacgg aagtgtaaaa tcagatagtg aaaatattaa agacgttaag       60

ctacaattaa attacgcata cgaaatcata ccagtagatt atacgaattg taatattgat      120

tacttgacta ctcatgattt ttatattgat atttccagtt ataaaaagaa aaatttttca      180

gttgattctg aggtcgagag ctatattaca acaagtttta cgaaaaatca aaaagtaaat      240

atttttggtc ttccgtacat atttactcgt tatgatgttt attatatata tggtggggtt      300

acaccatcag taaacagtaa ttcggaaaat agtaaaattg taggtaattt actaatagat      360

ggagtccagc aaaaaacact aataaatccc ataaaaatag ataaacctat ttttacgatt      420

caagaatttg acttcaaaat cagacaatat cttatgcaaa catacaaaat ttatgatcct      480

aattctccat acataaaagg gcaa                                              504


<210>  677
<211>  645
<212>  DNA
<213>  Streptococcus pyogenes

<400>  677
ttgctagtcc cagtctttat gatagtgtaa tagattttga taaatgtaat gaaaagaaaa       60
```

```
agcaaaatgt aaaagtctca ttaaatagtt attctaaaag agcagcgttt agaactactc      120

catttggtat ctttactgct attaatacag ttgatttgac aaagggaacc acttctaatg      180

tacaaaaggt tagtttttatt aaaaaagcag tcccagatta ttcatggata tattctctag      240

taaaatcgta tgaaataagt aaccttgaaa aactttcatt aaaaataaat acagcggcgt      300

ttactcaagg tgacagatat gtactaccat ttacagtgaa tgaatcagag gaagatagaa      360

acataagttt ttcaaaacca attaagttac ttgtagaaaa atgtaaaact cgatatataa      420

aatatgaaga gttaatagat gtatttaaaa ataattatcc agatatagtg tcagacatgc      480

tagagtcata tatacacgac ttagttacaa atgatttttt aatttcagat ttaagaccac      540

caatttgtaa tatcaattcc ttagattatc tactatctaa attagaagaa ggaacactat      600

gtactgactt aactacttta aagaagatga ttgaagatta caacg                      645
```

```
<210>    678
<211>    703
<212>    DNA
<213>    Streptococcus pyogenes

<400>    678
gatagtagct gaaagtgaga ataaagtact aattaatatt gaatctaaat atagaaatac       60

ctttttttgat aaatctctga gtcatggtgt gccatcatta atcttaatgt atagttcact      120

atataaagtg acaaaagatg agagatatct aacattctcc aacatatacg ttgagaaatt      180

agtagacata atctctagag atggtataga atctccgtct ctctatgctg gcactgcagg      240

tattgcatta gctattaaag aagcgagtat atctggaaag tattatccga aattattatc      300

atccttaaat tgtcttctaa aagaacaaat taaagacaaa ttggtagtaa gttttttctaa      360

tattgagaaa ggaattattg agccatatga ttatgatatg gttaacggat ttagtggaat      420

aactaattac ttactccttg aacaagaatt tttttctgta gagttaaatc aaattggaaa      480

ttatcttttg aaatatattg agacaatttt aaataaggta actaattgtt ctgaagatag      540

agaagctgaa tttgatctag gaattgcaca tggaattact ggtcctatgc taatcctagc      600

aaaattaaaa tcagaaaaaa ttttgagtgt agaagtagga gatatactga ataaagctat      660

aaatttaatg tttttatttta gaagggatga caaactatgg cct                       703
```

```
<210>    679
<211>    593
<212>    DNA
<213>    Streptococcus pyogenes
```

```
<400>  679
ttaactgcgg aaacaacagt aaatcagtgg ggagttattt ggattaatgt tattattgct     60

gtaaattctg gtttgttaaa taaattagaa ttagattcta ataagtattc tgttttttta    120

tcaagggatg ttgatttaaa aaaggtagaa tatgccagag ttctattgat agctcttata    180

aatctaataa ttagtatgat tttaagctta atgcttattg taattagttt tgtcctacct    240

actccaagtc ttattagtat aggtaggata ctattaacta tcttgttaat ttggttgact    300

acactatggc aaatcccgtt tattttatgg ctatcaagaa aaattaatgt gtattttgct    360

atgattatta atattatatc tccactaatt attggtacaa gttttctct cttaaataaa     420

tggtatttgt tcccttatga ttggtcgttg aagttgcttg agccaatgac aagaatgaga    480

ataaatagta taccttttgg agcggagttt gttccagact actcacagat ttttatatca    540

ttgttcctag gaattgcttt tttcatctta ctgaccaatc tatttgctat ctc           593


<210>  680
<211>  544
<212>  DNA
<213>  Streptococcus pyogenes

<400>  680
taatcggtcc aaatggtgct ggaaaatcaa ctattatgaa aattttgaca ggcttagtta     60

gtaagacaag tggttctatt attttgaag gtagagaatg gtcacgtcgg gatctgcgaa     120

aaatcgggag tattattgaa gaaccaccac tttataaaaa tttgagtgct tacgataata    180

tgaaggtagt tacaacaatg cttggtgttt cagaaagcac tatacttcca ttattaaata    240

aagttggtct aggaaatatt gacaagagac cagtaaaaca attttctctt ggaatgaagc    300

aacggttagg tatagctatc tctttaataa attcacctaa actacttata ttagacgaac    360

ctactaatgg cttggaccca attggaattc aagaattaag ggaaattata gagtcattta    420

aatcagaagg aatgacaatt atgatttcaa gccatatact gtcagaagtt gaacatctag    480

ctgattttat tggatttatc tatgaaggaa agattattct ggaaaaagaa tatgacggct    540

ctga                                                                  544


<210>  681
<211>  548
<212>  DNA
<213>  Streptococcus pyogenes

<400>  681
```

```
ggaggtttac aaagcaggac tgtattattc tcctactttc aaatagtagg tgtacttctt      60

ccttttgttg caagtattgt gtgcattcaa ctaaaaaatt tagaagaatc atctggaaaa     120

tataaatatt tattgggtta ctcacagtcg aattataaac catttattgt agaattagta     180

tttctatggt tatgctattg tatagtatta attatttcaa ttactatatt tattcttta      240

ttgaaaacta ttggtataaa tgtatctctc agactactta tttttgaatag tttaatttat     300

atcattttg cctatgtaac ctatctgatc aatcatatta ttagctatat atttagtaca     360

ggtgtggcat taggtatttc aatggtaggt gttattgctg cagcattttg tgaaacgagc     420

cttggtgata aggtatggtt tcttattcca tgggcatggc ttttaagaat atcagatact     480

ctatataacc aacagaaaat ggcaattgtt ccacttattg ttatatttttt tgtttcatgc     540

acagtagc                                                            548
```

```
<210>   682
<211>   311
<212>   DNA
<213>   Streptococcus pyogenes

<400>   682
aattagattt gaccattaca gagttgcagg accatattgc tcatctcaat aaggttgcgg      60

aggtcttgct taatctgaac aacaacgata tagagaaccg ccgtttggcc agatatgact     120

atgccaagat gaacttgact gcagctataa aaatagaaga agttgagaaa gagattgaaa     180

cttctcaaaa tgaacttaat atatccatag atgagtatga atatctagta agaaggttgg     240

aaaagtttgg agagatcttg agtgatagca aaattatcga tacttctcga aatgaaatac     300

aatgggagta a                                                        311
```

```
<210>   683
<211>   521
<212>   DNA
<213>   Streptococcus pyogenes

<400>   683
gtcgttgaaa ttgtctttgg agtttgtatc actgttttaa tgattgcgat aatatcgctt      60

tcttttttcaa agttaaatat agtgacatct cataatgtgg gagaagaatt ttatattaaa     120

gataaacagt caatcaaaca gttgaacaat tatatgaaga cattgggatt agattatgtt     180

gtttttgata gaaaaacaga taaagctatg gaaggaaaat atttatctaa agaattttct     240

ttatttaacg aagttgcaga agaaaaaaat aatctgactt ttaattctgt acattatgat     300
```

```
ttatatacta atatcaatta taatattgtc ataagatata atgagatacc ggagttttct        360

aaccattacc ttagaaatgt ttcatataac atgttgacat tttatattct gggaatagga        420

acgagtatca gcattgtagt tgctttaaca cggtttgtaa aagaaatttc tttgaatttc        480

aaggaaatca agaagttagc aaataaaatg gggatagaag t                            521
```

<210> 684
<211> 548
<212> DNA
<213> Streptococcus pyogenes

<400> 684
```
cttatgaaga ctgctttgga gattgaaaat tatcatgtta taacctgtca agagatagaa         60

ttaccaatag tttttgatga ttttaaagga tatgatttga tcttattgga tatcatgatg        120

cctaatataa gtggaactga gttttgttat aaaattcggg aagaagttca ttctccaatt        180

atttttgtta gcgctttaga tggcgataat gaaattgtcc aagctttaaa tataggggga        240

gacgatttta ttgtgaaacc atttagctta aaacaattcg tagctaaagt taactctcat        300

ttgaagagag aagagagagc aaagataaag aatgaggctg aggagagagt gaagcgcagt        360

tttccaccta tagaaatcta tctagaggaa cgtatgttat atattgataa acagccgtta        420

ttcctgactt atagagagta cgaaatttta gaattactgt cacgtcatcc gtataaagtt        480

ttcacaaaag aagagatata tgaacaagta tatagcgatg aagcttcagc attgtttcat        540

tctatttc                                                                 548
```

<210> 685
<211> 543
<212> DNA
<213> Streptococcus pyogenes

<400> 685
```
ttctccctac tggtgttctc aattgctatt agcttatttc aagggatttt acccattttt         60

agtatgctac tagttcaaaa aatgttaaac attataacga ctgatataaa aaattttcac        120

acattgatga ttgcttttat ctcatatatt gctttaacat tattgacaat tataatagga        180

gaagttgata gttatattga tactaaatta cagatacttc ttcactataa gatgaaccat        240

ttagttatgc agaaaactgt aaagttaaca ttggctgaat ttgagacacc agaaatctat        300

gatgatatca ctcgcataca aaatcaaata tcttataaac cttttcaaat atataagtca        360

attatttctg tattatcttc gttagtatca ttaatttcct catttgttat tttattaaat        420
```

```
tggaagatat caatttttcc acttttactt atccttccta tcgtttctat atatatctac      480

ttgaaaattg gtaaaaatga atttgagata ctatataaaa ggagtagcga tgagagagca      540

aat                                                                    543
```

```
<210>   686
<211>   512
<212>   DNA
<213>   Streptococcus pyogenes

<400>   686
agcgatcctt atcttacttg ttttgttgc tttttacttt atccatcttg cggtgcgtga       60

ttaccgaaat gcacgtatta ttcggatgat gagccataaa atccgagact tgattaatgg      120

tcgctatact gatataatcg acgaaaaagc agacattgag ttaatggagc tttcagacca      180

gttaaatgac ctgtcagatg tttttcgctt gacgcatgaa aatcttgccc aagaaaaaaa      240

tcgcttggca agtattttgg cttatatgtc agatggtgta cttgctacag accggtctgg      300

taaaatcatc atgattaacg agacagctcg caagcaatta aatttaagta agaagaggc       360

actaaagaaa aacattacag atttgttaga aggtgatact tcatatacct accgtgattt      420

ggtatccaaa acaccagtgg taactgttaa tagccgaaat gatatgggtg agtttgtctc      480

attacgcttg cgctttgcgt tgaataggag ag                                    512
```

```
<210>   687
<211>   520
<212>   DNA
<213>   Streptococcus viridans

<400>   687
acgtcctctt aacagtcaca aggggacttt tggccgtgtc cttttgattg gcggcaacta       60

cccttacggt ggtgctatca tcatggctgc ccttgcttgt gtcaatagcg gagctggttt      120

ggtgacggtt gcgacccata aggacaatat cacagctctg cacagccatt tacccgaagc      180

tatggctttt gatatggttg aaaaagatcg tttgtcagag caaataacag cagcagatgt      240

ggttcttatg ggaccgggct tggcagaaga tgacttggct caaacaacct ttgatgtggt      300

ttggcaggct atcgaaccaa aacagacttt gattattgat ggctctgcta taaatctatt      360

agccaaaaga aaaccagcta tttggccaac caagcaaata atcctaacac cccatcaaaa      420

agaatgggaa agattgtctg gactgactat tccagaacag atagaagcag caacacaaac      480

agcactagct cattttccaa aagaaaccat cctagtcgca                            520
```

```
<210>    688
<211>    463
<212>    DNA
<213>    Streptococcus viridans

<400>    688
atcaggctgt tatgcgtctg attagacaaa aggatgaaca agttaagaaa ctgcaaagat        60

cagttatttt cagacagcct gaaagactct atgatgctta tgttcaaaaa ttggatcatt       120

taagaacaca tttgttgacc aaggtgcggc aggtttatga tgtttatgat agcaaggaac       180

atttgctgag acaaagattg ttgtccttta atttatcagg gtgtattcag cgctatcaag       240

cacaattaaa acaagatcag cgtttattgt taagccacat gagcagtcaa tatgatagta       300

aattagcccg ttttgaaaaa gcacaagatg cgcttttgtc actggatacg actcggattg       360

tggcgcgtgg ctatgctatt gttcaaaaag ataatcacat tattcaatca acccaacaga       420

tcaaaaaagg agatcgcttg catcttgaaa tgaaagatgg gca                         463


<210>    689
<211>    360
<212>    DNA
<213>    Streptococcus viridans

<400>    689
aattgtgaac cagttagaaa ccggtgaaat tcctcttgaa gaagctatta ctcaattcca        60

aaaaggaatg gcgctttcta aagatttgca gaaaaccttg gagtctgctg aaaagacctt       120

ggtcaaagtc atgcaggctg atggcagtga agcagaaatg gacgagttgt gaaagataag       180

attaaatcca ttaatcaggc tattaagcat tattatgcgc aaactcatgt gtctcaggat       240

ttgattgaag cggtcttgta ttctgttgat gcaggcggta aacggattcg tcctctctta       300

ctattggaaa tcttgcaagg ctttggtttg gtacttacag aagctcacta tcaggtggca       360


<210>    690
<211>    463
<212>    DNA
<213>    Streptococcus viridans

<400>    690
gaagaaacgt gaacgattag aattaattaa aaaaattgtt ttagaaaatg aaattgaaac        60

acaaaaagaa ttggtcaaac ttttagagaa cgaaggctta caagcaacgc aagcgacaat       120

ttcccgtgat attaatgagg tcggtatcat taaagtacca gcttcaaata gtcgctatat       180

ttatggcctt tctaaggaaa taagcaaaaa agaagagtca acaccaaaac cagctgaaaa       240
```

```
agcagttaag tttatttcag atcaggtggc aggtttagag catctcattc atattgatgt     300

tgttcctgga aatagctatt tattgaaacg tttttttacta gagagatttg aaggacttat     360

ttttagcttg ctggcagatg atgacagttt gcttttgatt gttaaaaatg ctaaagatag     420

tgatagaatt cgtcaagaaa tcaaatcttg gatggccaat taa                       463
```

```
<210>    691
<211>    412
<212>    DNA
<213>    Streptococcus viridans

<400>    691
agatatgatt gcaacaattg aaaattttgc tcaagaacag gcagaatttc cggtttataa     60

tattttagga gaaatccata cctatggaga attaaaagct gattctgatt cgcttgcagc     120

tcatcttgat cagttagatt taacagcaaa atcaccagta gttgtctttg gaggacagga     180

atatgccatg ctggctagtt ttgttgctct gacaaaatca gggcatgcct atattcctat     240

tgatcatcat tcagccttag aacgtattga ggctatttta gaggtagcag agccaagttt     300

agttattgct gttgatgatt tcccaattga caatcttcaa gtcccagtaa ttcagtatag     360

tcaattagaa gagattttta aacaaaagct atcttatcaa atcaatcatg cg             412
```

```
<210>    692
<211>    560
<212>    DNA
<213>    Streptococcus viridans

<400>    692
gtgaaaagtc gcatcaaatc tttgccttgt ttttctatat catttggcaa attttctgtg     60

tctatagtta taaattttat agaaaatcac gggataataa gtggattttt tatcttcatg     120

tcttcatgtc tatcttacct ttatctttgg taaagattac tcctgcgatt tggacaaatc     180

aacaatcttt atttggtttt ttgggtatat cctatcttac ctttcgttca gtaggtatga     240

ttatggaaat gcgagacggt gttctcacgt catttacatt ttgggaattt atccgtttta     300

tgctgtttat gcccactttt tcaagtgggc ccattgatcg tttcagaaga tttaatgatg     360

attatgagaa gattcctgat aaagatgaat gctagatat gttggaacaa tctgttcact     420

atatcatgct tggtttttttc tataagtttg ttttagcgca aatattggga acaatgattt     480

taccgggttt gaaagaaatg gccttgcaaa aaggtggttg gttcaattgg ccgactttag     540

gagtcatgta tgtttatggc                                                 560
```

```
<210>  693
<211>  250
<212>  DNA
<213>  Streptococcus viridans

<400>  693
cagctgttgc agaagattta gccaaaattg caggtgttga cttgcaggaa tatggtttgg     60

ctatgcttaa ggctggtacc aatttagcaa gtaaaacggc tgcacaactt gttgatattg    120

atgctaaaac atttgaactt aatggtagtc aagtacgtgt agctcaagtc aatacggttg    180

atatcaatga agttttggaa cgtcaaaatg aaattgaaga agccattaaa gcatcacaag    240

cagctaatgg                                                           250


<210>  694
<211>  508
<212>  DNA
<213>  Streptococcus viridans

<400>  694
ttctcttaaa tcaaacagga agtatagcgg atcgttatgc agctaaacgt ttattagaca     60

ttaaaccgag ttcgaatttg caaggtatga taaaaaaaat tgcggctggt aaaaccttaa    120

atagctttga tagggcaagc ctgcgcctta ttaagagttt cttgaaaaaa gaagacgctt    180

tatttggaag tctgaccttt agtgataatt atgaacgtcg tgtattgccg catgtcaaaa    240

aattgcccaa gcacttttct tatggaacct taagtcaaat tgctagcaaa aatggtcaaa    300

ggttaacaaa aacaaatcaa tttgaaatta atgatcattt ttataataaa cgtattaaag    360

gacaattgaa aagactcaaa ggcttccaaa agcaactgtc ttatttacag tctccagaat    420

acaatgattt acagctggcg ttaactcaat tagcaaagtc aaagaccttt gtcatatttg    480

ttattccgcc ggttaatgcc aaatgggt                                       508


<210>  695
<211>  300
<212>  DNA
<213>  Streptococcus viridans

<400>  695
aattgttctc ttattggctt tctttggttt tcaacaaggt gttgatgcgc aaagcaaata     60

ccactatagt caagaactaa attactataa tggtaatgcc atggaacttc gtaatggttc    120

taatggtggt atgtttaact gtaattttgt ccctggaaat gtcggcttta ataacggctt    180
```

```
gatgagtctt aaaattgaca gtgatggtcg tggcggctac actgggggcg aatggcgtag    240

taaagaacgc tttggctatg gtcttttcca agtaaacatg aaacctatta aaaatccagg    300
```

```
<210>    696
<211>    266
<212>    DNA
<213>    Streptococcus viridans

<400>    696
gtcttggcgc gagtttttaaa ccaattcaat gttttcttga tggtgtagct cgtgtttttg    60

gtactgacgg tcagttctcc atcttcaatg ctagcggcca caatgtctgg catcttaagg   120

acaatgcttc tatctgctaa agtcagtgtt aacagttcca tacctttctt ttctgtcgta   180

gctgtttcat ctattgtaga taagtgttgt attttcttaa ctttagccaa agctttatcc   240

acacgccccct gctcaaaagg cttcaa                                        266
```

```
<210>    697
<211>    400
<212>    DNA
<213>    Streptococcus viridans

<400>    697
cattggttcg atcagtcaga ccaacggcat caaaattagt atgctgctta atgatattac     60

acactttagt agctgattgc tgactcagtc cctgtcttaa ataaggaagg gtttgctgcg    120

tcaaatctaa aacatcccga gtctgaacag ctctcagctg tctttcattg gataagtagg    180

tcttgagaat agctagaaat aaggtcgaac ctagactgtt aagcaacatc ataggaatga    240

aaatcagttt aaccaaatcc cagccagtaa agaaaccgac aaagagcatt tgaatacttt    300

cagcaataat gctgataaca atgacctgcg aagtagatgg ataaaggtta ttagttttta    360

attgatcacc cagtcgacca ctaatatatc ctaccaaagc                          400
```

```
<210>    698
<211>    381
<212>    DNA
<213>    Streptococcus viridans

<400>    698
tgattaaagg agttaagttg gtgaattgac ctgaaaaaat tgtttcaagt cccttaaatt     60

tcgttacatt taagttgtca aattccaagg caattttaga ataattcgtt ttaggcaata   120

aggtcttaat ttttccaaaa ggattttcaa aatcaagata gccagtcacc gaaatatcta   180

atatacttttt tgctcttaaa gcatcaagtt caggtaaaaa aagcagagtt tcttgatctg   240
```

```
caaagaggaa gaggaacata aggcgttcat gcggatcact ataaaaacct gttaaataat        300

taatggagac aggatctgaa aggacagcag cttcaatacc ttgcttttg agttttgaa          360

caatctgtgc taattttgac a                                                  381
```


<210> 699
<211> 505
<212> DNA
<213> Streptococcus viridans

<400> 699
```
agaaaaagtt gactacgaaa aagtaacagg acttgttaat tctacagaat cttttgggtc        60

tgtagacgga cctggtatac gctttgttgt ttttatgcaa gggtgccaaa tgcgttgtca       120

atattgccac aatcctgata cttgggcaat gaagaatgat agagcaacag aaaggactgc       180

aggagatgtc tttaaagaag ctttacgttt taaagatttt tggggagata caggaggtat       240

tactgtttct ggtggtgaag caacgctcca gatggatttt ttaattgccc tcttttcttt       300

agcaaaagaa aagggaattc atacgacctt ggatacctgt gctctgactt ttagaaacac       360

accaaaatat cttgaaaaat atgaaaagtt aatggctgtc actgatttag tattgttaga       420

tattaaagag attaatcctg accaacataa aattgtcact ggtcatagca ataaaactat       480

tttagcttgt gcgcgttatt tatct                                             505
```


<210> 700
<211> 407
<212> DNA
<213> Streptococcus viridans

<400> 700
```
tgatgctgag tacaaggatt tatccaataa tctcagcgaa tcttactata ttttagaaga        60

tgttagcaaa cgtctagaga ctatactgga tcatatggat tttgatgcca atactttggt       120

taaacttgaa gcacgtcttg atgttatcaa caccatcacg cgtaagtatg gtggttcagt       180

tgatgatgtt ttggcttatt ttgacaatat cagtaaggaa tacaatcatt tgacggtaaa       240

tgacctcgct tttgatgata tggaaagaga actaaaagtt ttggagcgct cactattaga       300

agcagcagct caattgagtc aaaaacgcca tgccattgcg gaaaccttgt ctcaggagat       360

taagcaggaa ctaaaagatc tctacatgga taaggctgat tttaaag                     407
```


<210> 701
<211> 250

```
<212>   DNA
<213>   Streptococcus viridans

<400>   701
cggcagacaa gtcagtcatt actcagcctg ctacaaccct gacagctatt aaaaagattt     60

tagagagatt agaaattggc ggtcgtttgg caattatggt atattatggt catgagggtg    120

gcgataagga aaaatatgcg gttctgaact ttgttaaaga gctagatcaa cagcatttta    180

cagtcatgct ttatcaaccc ttaaatcaaa taaataccccc acccttttttg gtgatgatag   240

agaaattata                                                          250


<210>   702
<211>   213
<212>   DNA
<213>   Streptococcus viridans

<400>   702
gtgatattat ccaaaccatt ctcaatgaaa gattttcgcg gattcctgtt tacgatgatg     60

ataaagataa gattattgga atcattcata ctaaaaattt attgaatgct ggtttcaagg    120

aaggttttga tcacatcaat cttcgccgta ttttgcaaga gccgcttttt gtaccagaaa    180

ctattgttgt aaatgacctt ttgaccgctt taa                                 213


<210>   703
<211>   615
<212>   DNA
<213>   Streptococcus viridans

<400>   703
attggacttg tgtcagcttc gatttcaagc ctattttttg tgtccattgc gagcagtggg     60

atcgtatttg ctcaagaaaa tgcagctgtt cactacaaat atgtgacgga tacagagcta    120

agtagtcaag agaaggactt gattgtaaag ggcattccta aaattacgga agatagtgag    180

agcacctatt atctagtcta ccgtatggat gagaaagctc agctgggtca gttgcccaat    240

acaggtgggc agaatagcct tactagtgtt ttaactggtg gagtcctagc ttcgattggc    300

cttcttattt ttgtcgtatc gaaaaagaaa ggcaaaaaga aagcactgtt gaaagttgtc    360

ttgataacag gaatgggcag tggtttggct tcttcggttc atgctatcga aaatcaactt    420

ttgctccaat acaatcagga ataccaatta tctcaaggag atagtctgcc tttgccacgc    480

gccctgtcag gatataccta cctaggctat attaagcaag acaaagagat taatcagcaa    540

gaaactgctg ctagggatca gaaatttgac tacacggttc agcctcattt tcagaccaat    600
```

```
gaaggtagac aaagg                                                     615


<210>   704
<211>   541
<212>   DNA
<213>   Streptococcus viridans

<400>   704
gaaggcaatg aggagactta ctatcttgtc tacaggttaa actcaaatgc tggatcaaaa     60

accttaccga atacaggcga cagtaacaat tccaatacta tgatgacggc tggtttgtta    120

acgacgatag gattggttgt ttttgttgtg tcgaaaagaa aggttaaaag caagttccta    180

ctgactgttt tggtgggggc tagtgtcggt ggaggtttga tactatccgt caatgcgctg    240

gaaaatggga tcttgctaca gtataatgcg gaatatcaag tgtcggctgg ggaaagtctg    300

ccgtcaccaa gtgaaatttc aggctatacc tatgttggct acattaaaga agaatcgatt    360

cagaaattat tagacaataa gattcttaac aatcagcaaa atgctaatct agataaagaa    420

actttaaacc aaaataagaa gctagattat tctctttctt ttgataagaa tgggctgaaa    480

aatcaaacgc ttggcgtcaa tacaattgag cctcaagatg aagtcttgtc tggccgagta    540

g                                                                    541


<210>   705
<211>   563
<212>   DNA
<213>   Streptococcus viridans

<400>   705
ttttattggg aggttttctt tattatatta ctaatcctat tgtcactttt ttagaaaacc     60

gttttaaaat taagcgtatt tgggggatca ctcttatttt tgctgtattg ctttccttgc    120

tggtttttc tattaccagt ctgattccca atttgattaa tcagctaaca gatcttattt    180

cagccagcca aaatatttat gtgggtttgc aggatttatt caatgaatgg aaaagcaatc    240

ctgcctttaa aaatattgat atccctgttc ttttaaaaca gttcaattta tcttatgttg    300

atattttgac aaatgttttg gatagcgtga cagttagtgt ctcaagtatt gtttatatga    360

ttacaaatac ggtgatgatt ctggttctta cacccgttat tctttttat ctcctcaagg    420

acaaagatgg tttaatgccc atgttagatc gtactatatt gaaaaatgat aggcataata    480

tcagtcaatt actgaatcaa atgaacaaaa ccatttctcg ttatattagt ggtgtagcta    540

ttgatgctgc cttcatattt gtt                                           563
```

```
<210>   706
<211>   500
<212>   DNA
<213>   Proteus mirabilis

<400>   706
tgaaaaagtt attattatct gcaattatta cttcagcaat ggccataatt gctacacctg       60

ccctagcaga agatactggt acaccagcac caacagaagt tacagttaat ggtggtacta      120

ttaactttga aggttctgtc gttaatgctg cttgtggtgt tgatagtagt tcaagtaacc      180

aaactgttcg tttgggtcaa ttccgtgtcg ctgaattcac taaaaaaggt gatgaaacag      240

gacgtattcc ttttagcatt aaattaaata actgcgatat tactgtttca tcattagcag      300

caattacctt taacggtaca gcttctgatg gtgatgcaac tgcattcgca ttacaaggca      360

gtggcgcagc aaccaatgta gcgttaaaaa ttaccgattc aagcagcaaa aatgttgttc      420

caggacaacc ttcttcaact caaaaattaa tcgaaggtga aaaccaatta aattataacg      480

cttctcttat ttccactgat                                                  500


<210>   707
<211>   346
<212>   DNA
<213>   Proteus mirabilis

<400>   707
agatgaaaag cttgctaatg aaaatacact acaaattgcc atccagagtc ggataaagct       60

tttctaccgt cctagtggat tgtccgctta tactgaaaaa tatgccaatg aagtgacttt      120

ttcctataaa aatggggagt taattgccca taatccaaca ccttatcata ttactatggt      180

caatttagct gcagccgaca gtcaacttcc ttcaagtatt atgattaacc cattttcaca      240

attaacatta ggaaaagtta atcagaatgc taataccatt tcattccaaa ccattaatga      300

ttatggcgca cagactcctg tttttaaaaaa agaaatcgtt cattaa                    346


<210>   708
<211>   563
<212>   DNA
<213>   Proteus mirabilis

<400>   708
tggctgactc tcctgatgcc gtcaccgatt taagttattt tgaagcaggc aaccgcatta       60

aacccggtga ttatcttctt gatattgttt ttaatcatga gtatctgcgt agtgaaaata      120

ttcattttat tagtcaagat aaccatgtta ttccttgttt aaatcgagat tattatcaat      180
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cactcgggat caatattaaa ctatttgctg attttgagaa attctcggca aatgaatgta    240

ttgatattga aaaaatcatt ccagattctg ttgttaatta tgatattgag aaacaagctt    300

taaatattca agtccctcaa gccgcgttag atttgaaagc acgcggttat attccaccag    360

aaaaatggga taacggtata acagcaggta ttttaaacta cacctttagt ggcgctaata    420

gctggggaaa ttctcataat aatagctact acttaaatct acgtagtggg atcaatattg    480

gtgcttggcg attacgcgat tattccactt ggaattcgtc aaacgggaaa aaccaatgga    540

accatatcaa tacctatctg caa                                          563
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<210>   709
<211>   527
<212>   DNA
<213>   Proteus mirabilis

<400>   709
atggataata agcgaacaca gcgggatatt atatttagca taatatggat tatttggtca    60

tgtgcattaa tggcttttttg gcgatatcaa atagctggtg agcttttgat caccccttatc   120

ctaattttta gcattattat ttactctata actttgaggt taaaaaaaac ggcaatgttt    180

agtcgaaaaa cagaaacacc aaaagccgcg gagcctattg ctccagttat ggcagaagag    240

aagaagccta tgccggagca aaaattgtat accattattg ctaaaggcac tgtatttcaa    300

ggtgatatta cgttgatgg tgatattcaa atttggggta aaatttcagg gaatatcaat     360

gtaaaagatg gcgtgatccg tgttatgcat gcaggccaag ttgaagggga attgacggcg    420

ccagacatca ttattgatgg ttttgttaaa ggtatttgtg ccgcaaacaa tcttgatatt    480

ctagagcatg gtgaactacg tggcactagt cgttgtggca gtatgtc                 527
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<210>   710
<211>   431
<212>   DNA
<213>   Proteus mirabilis

<400>   710
ttatattgaa acactgaagc aacggctgga tgcgattaat caactcaggc tggaacgtgc    60

atttgcatcg atgagtgatg tgtttaaaca ggtgtatggt ttaattcctg ttttactgca    120

ttaccaccac cctcagttgc caggctatat tcaaggaaat gtccctcatg gtacatgttt    180

ctttgaacct gatgacgtgc aacgtcaatg ggttaataag ctgactaatg catcatgtga    240

tgagccaatg aatggataca ccagcggaga gttacctatt acgggtatct attcgatggg    300
```

```
aagtacttcc tcgattgggc aaagtcactg ctccgatatt gatatttggg tctgtcacca    360

atcttggctg gaccaagatg agcgtgcgcg tttacaacgt aaatgtttac tgatagaaca    420

atgggcagga g                                                        431


<210>  711
<211>  528
<212>  DNA
<213>  Proteus mirabilis

<400>  711
cgctattaac cttgctgaac gtggtatgag tgtcactatc ttagaaaagg gtcagattgc     60

cggtgagcaa tcaggccgtg catacagcca aattattagt taccaaacat cgccagaaat    120

cttcccatta caccattatg ggaaaatatt atggcgtggc atgaatgaga aaattggtgc    180

ggataccagt tatcgtactc aaggtcgtgt agaagcgctg gcagatgaaa aagcattaga    240

taaagctcaa gcgtggatca aaacagctaa agaagcggca ggttttgata caccattaaa    300

tactcgcatc attaaaggtg aagagctatc aaatcgctta gtcggtgctc aaacgccatg    360

gactgttgct gcatttgaag aagattcagg ctctgttgat cctgaaacag gcacacctgc    420

actcgctcgt tatgccaaac aaatcggtgt gaaaatttat accaactgtg cagtaagagg    480

tattgaaact gcgggtggta aaatctctga tgtggtgagt gagaaagg              528


<210>  712
<211>  409
<212>  DNA
<213>  Proteus mirabilis

<400>  712
ttgttgcaat acagccatca tgcttttaac ttgagagtta ataaatgtca catctgccag     60

atatttaacg ctattatcgg gtacgtacaa attactccgt tccatatcca tatcgaccgt    120

gttaccatcc atcgatgttt gatgaggaac ccgataaagc aaatcagcct ctaagcgata    180

acccggctta ataggaatat gccgttctga tgtcattgtt agttgcaatc catgactacc    240

agtacgcccg ttttccatgg ttttttttcaa ctcagctgcg aaatcaatat cccgagcttg    300

gaagcctggc gtatcagcat tagcaatatt tgccgccaaa atttcttggc gtttattacg    360

tagtgaaagc gcttcttgtt gaaaatgaaa cgtattttgt aatttatcg             409


<210>  713
<211>  513
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<212>    DNA
<213>    Proteus mirabilis

<400>    713
aactttagcc ccactactat cagtaatatt gactgtaagc gtatctattg gactaaagga      60

ttcaaaacca aaggcgctgg cgaagatatt ttcattatca ggatctggcg tatcagcaga     120

tcttaataac ggatctaatt tagtatcagg cgttttatct gtatcgatat ctgtatctgc     180

atcagatcca gcgttttcac cattattact cttatcaacg tagatatcat taccggcaat     240

catcaccata tgattaacca atgaggtcgc acgtaatgcc tgactttggt caatttggcc     300

aacaatagta ttgactgttt tatttagcgt ctctatccct tcaaccgtag aaatctgtgc     360

taactgtgac gttaactcat tattctgcat tggattggtg ggatcttggt tttgcatctg     420

cgtgataagc aacgtcagga aattaccttt aatatcatca ctcccccctt ttttagtgtg     480

gtaggacgaa ggcgcttccc cgataatggt att                                  513


<210>    714
<211>    404
<212>    DNA
<213>    Proteus mirabilis

<400>    714
actccgccag accttagatc ttcagttatc acagctcaat accattgcgg gtattttacg      60

tgctgagcaa cagttattat gtgcaggaag tattgatatc aataagctgc atgaaataac     120

tgaacagaag aattttgtat taacagctct aggtcatacc gatcaaaaac gtcaaatact     180

cagtaaacaa gttggtattg atagaccta tcaaggacag ccttttttag ctgatttatg     240

ggggcaactg gttgatctaa cggaagagtt aaaacatctt aatcaacata atggcttatt     300

gttagagcaa catattactc gcaatagtga aacgctgcat tttctacaga aaaatcatag     360

cccaacactt tatggtgcag atggacaagc acagcgttca atat                      404


<210>    715
<211>    236
<212>    DNA
<213>    Proteus mirabilis

<400>    715
gcgattctat ggctgatgca ctaaaagagc taacattgcc tcaattggtt aagttggctg      60

aaacaaacca actaatctgt aatttccggt ttgaagacag cgaaacaata gaacaactca     120

ctaaagaatc cagagtggat gatttgcaac aaattcatac tggtatcctt ctttcttcta     180
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acttgttccg tcaactatcg gaacatgata cctctgctac aaagaaacgg gcataa   236

<210>   716
<211>   633
<212>   DNA
<213>   Proteus mirabilis

<400>   716
tctaatctta attcctctgt tcctattaac aagtttttac cttcaatatc aactttatca   60

tcatttaatt gtaatataac atgaccatgc ccctggattt taccaccaag agatatacta   120

tcatcagcga caatatgaaa aacactatta tacgacaatg atatattgtt tatttctagg   180

gttcctactc ttccatataa ataactatca tcaatattaa atgttctatc taaaatcaac   240

gtatccgctt tcacaaatag aatactatct ttaacattaa atgatgattc attaatataa   300

gaagaatatt cataaaccat tacttttgat tgtttcgtcc catcatgagc tgttctatat   360

aaattatcat cttgatttat atctatgtgt cctgtgttaa ttaagccata agactcatga   420

tttagtgaca aagtatttat attaccatca ttataaacgt taccctcttt tgctttttatt   480

attaaatatc gactatttat tcctgcctcg gcatttaatg aaaatagagc atttctatca   540

taatcatttt tagctccaag attaaactca cttaacccca tatcaaaacg aatatattca   600

gcatttaaat cacctttaat caagtctata tca   633

<210>   717
<211>   628
<212>   DNA
<213>   Proteus mirabilis

<400>   717
tctttactga gcttccatcc agccgatccg agttggtcac aaaccacgtg gaatgaacct   60

attcaaaact taggtggcaa tattggtgca tggcttgctg atatcctttt ttcagcattt   120

ggcttgctcg cttatgcaat ccctattgtg gtggtatttg gttgctggaa tgcattacgt   180

catcaaaaaa atcgtgaata cacagatttt ttctcccttg cattacgtac aattggtgcc   240

ttggctctgg ttcttacatc ttgtgcgtta gctgatctta attttgatga tatctacaat   300

tttagctctg gtggggtgat tggtagctta tttagcaagg cattgctacc ttggtttaat   360

atgctaggtg caacactggc gctactatcg gtatgggcga taggctttac gctatttact   420

ggctggtcat ggctgacgat taccgaaaag attggtgcgg ttatcttagg tgcggttgct   480

tttattacta atcgtggtca aaaagatatt gattatgatg attatgaaga acccgccgat   540

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cctgctcagg cagatcccga ggcgttggtc gataacaaca cccagccaga acatcaactt        600

tctgcgcaaa tagagccaga tagtgatg                                           628
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<211>   501
<212>   DNA
<213>   Proteus mirabilis

<400>   718
tattgagcgc attgatttac gcaccaaaaa aacagagtca gggaaagatt ttcttgccat         60

caaccctaaa gggcaagttc cggttcttca attagataat ggtgatattt taacggaggg        120

tgttgctatt gtgcagtatc ttgccgatct gaagccagat agaaatctta ttgccccacc        180

aaaagcatta gaacgttatc atcaaattga gtggctaaac tttcttgcca gtgaagttca        240

taaaggctac agccctctat tttcatctga tacgcctgaa agttatctcc ctgtggtaaa        300

aaacaaacta aaaagtaaat ttgtttatat taatgatgta ctaagcaaac aaaaatgtgt        360

ttgtggtgat cactttactg tggcggatgc gtatctgttt acgttaagtc aatgggcacc        420

tcatgtggcg ctagatttaa ccgacttaag ccatttacaa gactatctag cacgtattgc        480

acaacgtcct aatgtgcata g                                                  501
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<210>   719
<211>   301
<212>   DNA
<213>   Proteus mirabilis

<400>   719
tcatatcgct gtattacctt gatatacagc ggttaaaatc tctctagctc ctttatctag         60

tagctcttcg gcaagagaaa taccagcttg ctctgcatct tcaggtgata ctaagcgttc        120

gccacgtaaa atagttttac catcaggggc gccaactaat gctcgtagcc aaattttgtc        180

gttttgccaa attgcataac taccaatagg tacttggcac cccccctcaa ggcgagtgtt        240

catcgcacgt tctgctttta cacaagttgc agtatctgcg tggttaaggg cggctaataa        300

g                                                                        301
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<210>   720
<211>   507
<212>   DNA
<213>   Proteus mirabilis

<400>   720
agcgcaaact cttcagatac ataatcaata aatagacgct gataacattc acattcatca         60
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acaattgcac cgcgttgacg taatgttgtg gcaagtagtt cgcgaccacc attgcctctt       120

agtagtagta ctcgcttgtt ttctatttgt tgaagtgaag acaaggccag taggtcttca       180

ctggtttctc caaattctgg ataacgtata gaatgtgctg ttaattgctg aaactcttcg       240

gcggtgcttt gacctattcc ataatagaat agcgtatctg gccacgattg ttgtaattga       300

tttagttgcc agtttgcgta ccacaccgca tttttagaaa gtaaaaaaag gtaatcaccc       360

gtacttagct tatttaattt gttttctaat atggaaagct ctttacccgc ggctatttct       420

attaaaggtg catgaaaagc atgctttccc gcatcaatta agcgttgcgt aagttgttct       480

cctgctgggc taggacgagt gattaaa                                            507


<210>    721
<211>    402
<212>    DNA
<213>    Proteus mirabilis

<400>    721
aatattggtc aagctgcaaa aaatccggta ttttcaagta aaatgatccg atattatgag        60

caaattggtt taatacctaa ggcaattcgt actgacggag gttatcgtga ttacaatgat       120

agcgatgtag attgttttcg ctttatcagc cattcacgtg ctcttggttt ttcaacagag       180

caaatatcaa cattattagt tttatggaat aacagagaac ggacaagtgc tgatgtaaaa       240

gctattgctc tttctcatat cgatgaatta aaccgtaaaa taacgcaatt gcaacgaatg       300

acgcaaacat tatcgcattt agcacaagag tgccaaggtg ataataatcc tgattgccca       360

attattgcta agctagtcga accccaaaca gggacagaac at                          402


<210>    722
<211>    300
<212>    DNA
<213>    Proteus mirabilis

<400>    722
aaatagtggt ggtgtgttcc aagagcaacc tgactttaaa gagccaccac tttctattga        60

aggtgcagcc gatcactgga accatcgtga agatgaagat tatttcagcc aacctcgtgc       120

actgtatgag ctattaagcg atgacgagca tcaacgtatg tttgcgcgta ttgcgggcga       180

attatcacaa gcaagtaaag aaacacaaca acgccaaatc gacttattta ccaaagttca       240

tcctgaatat ggcgctggtg ttgaaaaagc gattaaagtg ttagaaggga aagacgctaa       300
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<210>    723
<211>    220
<212>    DNA
<213>    Proteus mirabilis

<400>    723
atgaaagcaa aaattgtact aggtgcggta attctggctt caggcctatt agcaggttgt      60

tcttctagca acaacgcaca attagaccaa atctcttctg atgtaaaccg tttaaatacg     120

caagttcaac aactaagtag tgatgttcaa tcagctaacg ctcaagcaaa agccgcttat     180

gaagcagctc gtgctaatca gcgtctagat aaccaagtaa                          220


<210>    724
<211>    521
<212>    DNA
<213>    Proteus mirabilis

<400>    724
tgcacttgtt tacgagagat tttgatccct ccattcttta gctgttctgg taatagtaaa      60

caagcgatgg gacgttgaaa gcctgctaaa cgcgtatgat accattgtgg taattgatta     120

attgtctcaa tatcagtatc aacaacagca acgggacgtt gaccaaattc aatatcgtca     180

atcgggacaa taaatgtttg gcgaacatta gggtgactat ttagcacctt ttcaatatct     240

tctggctgta taccttcacc cgcactaaaa aacagattat ctaatcgccc taaaatgcac     300

cattcctctt ctttaaaaca acctctatcc cgtgttgcat accaagcatc ctgagtctgt     360

gataacggct ttaattgacc atcaaaccaa tatcctaatg caacactatc agatttgatc     420

tggatttcat tatccactaa tctgaccgct ttacccttta atggcgtacc aactcccgct     480

ttaccatctg cgcgttttgc acaaacagta gaggccattt c                        521


<210>    725
<211>    273
<212>    DNA
<213>    Proteus mirabilis

<400>    725
cagacaatgc gtttattttg tgttcactaa aagcggtgag catatcgtcg ataaaagtga      60

gtcgtttttc tcgatcggtt agggtgatca taaatttcaa tttggtaggg ccatctaaac     120

ggaagatgct cggttgctct tgcaataaac cgattaaata agtcgggtcg acattatttt     180

tttcaccaaa ctcaataaag ccacctttgt catgggcttc aatgcgagat atacctaaac     240

tcatggcgct taatcgaatc gccgcattac gta                                 273
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<210>    726
<211>    769
<212>    DNA
<213>    Proteus mirabilis

<400>    726
aaacaataga tactttgcca cttaactttc gtattttaat aaaattagcc ccactccctc      60

tgattagtgg cattattatg gcaataatct caacaatgct aagtttagca ccattatgga     120

tcatctataa aatcagccag atttgttttt caacatcacc taatattcaa caaataaata     180

atctagttta tatcactgtg attattttaa ttttacgttg gggattaatg gcaataagtc     240

atattgccgc acatcggggt gcttttttata ttcagcatca attacaactc gcaatagcta     300

aaaaaatcag taaagtacca ttatcatttt ttgctcaata tggcagtgga aatctgcgac     360

gtattatcaa tgatgatata aaaagcttag aaggtttttt cgcacatatg ctacctgatc     420

tcgtctcagc catagtgact ccctttatcg ctattatatt acttttttat gtaaattggc     480

ctcttgcctt attatctcta accccattac ccattgcttt tatggctcaa cttctcatgt     540

tgcgtcgagc caataaacaa accaatgagt ggatgaatat tcagaaaaaa attgctaatg     600

aaataggaga atatattaaa ggaatacgag aaataaaagc gtttaactta acctcccata     660

cttttggtaa attatctcaa tctatcaatt cctctgttaa atggataaaa aataatgtca     720

aagctagtac aggctcttgg atggtattta gtgggatatt aacagcgaa              769


<210>    727
<211>    516
<212>    DNA
<213>    Proteus mirabilis

<400>    727
cttgccgtag ttgaaggtct ttttgctact attccatata ttctactcta ttttttatta      60

attgatcttt ttgccaataa aatcacacta gctcagttat tttattactt tttatcaata     120

ctcttatcta ttgttctgcg tattgtcatt ggtacttata gtatgccaat gattttttatt     180

ggtgcttata aaatgatggg acaagcccgt ctaagaatag ccgatcattt acgaaaaatc     240

ccgattggct ggttttcttc tcaacgcagt ggtgatcttg catcacggct tactgctgat     300

ttagagatca ttcaaaatat ctggtcacat ttcttaggaa tgtttatcag tactttagcg     360

atgcctgttt ttctctcact attcttagta tgggtagatt ggcaactcac tttaattata     420

ttattttcta ttccaatcgc tctgttcgca ttatccataa gccataaaat aatgttaaaa     480
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```
gctgcacaac aggcagctga tgctaatgcc aatgta                                516
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<210>    728
<211>    673
<212>    DNA
<213>    Proteus mirabilis

<400>    728
ttaagtaaag ctaaatccag aatgcacatc ttaaataacg atgaaatttc atcgttattc      60

gactaccctt ttataaaaca acgaaatatt tttttgctat caagagtcat gttacgcgat     120

attttatcat tttatttaaa aatttcacca gaagatgtaa gattttcaaa aaatgagtac     180

gggaaaccat ttattttaaa cgaatcaaag gaaagcattt acttcaattt atcacattca     240

aataattgtg ttgctctcgc tatttcaaat acatcatccg ttggtattga tattgaatat     300

ttcaaccgtg atatagaaat aaatagcatt atagattatt atttctcaaa aaaagaaaaa     360

aaatacctat cttattttga cgagactcaa aaaaaacata atttctataa gatgtggaca     420

ttaaaagaag cctatattaa atcaagaggc attggattat cagaagaaat cattaagaat     480

ttagattttt atataaagag agatcaattt gataaattat attttataga acagcattac     540

tctgctcatc tttcatatat taccaaatca atattagata gctataaaat atccataatc     600

acatatcacc atccatttaa ctataaattc ttaacatggg gtgatataaa aagcaacctg     660

ccacatcatt tat                                                        673
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<210>    729
<211>    682
<212>    DNA
<213>    Proteus mirabilis

<400>    729
attattctcg ccagtgtttc gacagaaaac gatcactttg atcaagagtt acctagtgac      60

accaagatac aacaaagttc acactaccaa tggcaattaa caccttgtgt ggaacaagat     120

cttatcaagc caacattaat atttaaccat caacaaacat tgccttctga aatcacagct     180

attttatccg ctattggatg tctttctgaa cagggcgaaa atcaattaat cgttgccaac     240

cttgcagatc ctttaattat cgccgagcag atccgccaaa tattactgtc atcgtctgat     300

gggtttgttg ttatcacgca acaagcctgg gcattaactg ccatagaaac ggttaatcca     360

gcacaacgta gtattcgaag tttattaaaa actattcaaa agaatatag ctcaaggtta      420

attgccattg ttgatttagg tataaatgcc tcatggtctg aattagttcc tgctttata     480
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caaatagaac aaggtaataa tgaaattatt gttcgtaacc attgctgcta cttaccacaa      540

ttaaccccac tgccctcatc ttctacgatc atagcgcaga acatcatggt atccccgcgc      600

tggcatatta ttactggtgg ttttggaggc ttaggtcgaa ttacagcaag ttggttagta      660

aggcaaggtg ctaaacgtat cg                                               682
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<210>    730
<211>    609
<212>    DNA
<213>    Proteus mirabilis

<400>    730
aatgtaaata aagacaatgc taacctattg gtttgcccat ttgctggtgc cagtaatagt       60

gcatttaact cgtggagatc taccgatatt tcagggttaa attgtcaatt agttaattac      120

tctggccatg gttgcagatt taaagaacca gcctttaatg atattgggtt attagccaat      180

gaattaataa caataataaa gaaattttat ccaccacggc ataattcatt attactttgc      240

ggtcacagta tgggggccca agttgccttt gaaactgcta ttcaattaga aaaaaatggc      300

tgggaattat ctggactaat attatcaggc tgccaagctc ctcatattca agcaaggaga      360

ttactgagtg atttaaatga tgatgacttt attcaacaat taattgccat tggtggatgt      420

gatgctgaat taatcaagca gccacagttg ttaaaacagt ttatgccatt attacgtgct      480

gatttccttg ctaccgagcg ttattttttt caaaaaagca ctaaacggct ttttcatacc      540

cctgttttat taatgtatgg tagtcatgat agtgaagctg ataaaaacga agttgaagca      600

tggcaagat                                                             609
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cagactacaa tcattagcag aaaaaaatgca ttgccactat atcgttaaca gcctctatcc      240

acataataaa gcaggacgtt tatggataga aaacacacag aagatatatc agcaaataca      300

acaacgacca gtgtggggac aaattatcac aagcaggcaa ttaatttatt ccgccttaga      360
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tatatattgc caagcaatga aattacaccc taatgatatt acagtcacat tagaaaaaga   420

taataccccg ctacaatttc tacgactatc caaccctact ggtgatttgc ttttatgcct   480

acaaaaacat ttgtcatcta acgatcctga tcagcatagc ctcgtgatgc atcatatgat   540

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taatgcgct   609

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cagaaagcga tgcaatggtt gatacattgc gtgataaatt tattcagcaa aatggttggg   180

gattttgggc cgttgaatta aaagagactc aagagcttat tggctttgtt ggattaaata   240

ttcctaatgc cccttttgcct tttaatccgt gtgttgaaat aggttggcgt attgcacaat   300

ctcattggcg caaagggtac acttatgagg cggctttaac agtattaaaa tatgcttttg   360

aacagttgaa actggaagaa gtcgtggcat ttaccgcagt gactaattta ccctcagaag   420

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tggattagca gcatcttcaa gccctgtaat tgttgatttc agtgaaattc caacttctgc   180

attagcaaat ctgcaaaaag caggaaatat caaaaaagat attgaattac aagactgtga   240

tacaactgta gcgaaaactg ccacagttag ctatacacca agtgttgtta acgctgtaaa   300

taaagattta gcctcttttg tttctggtaa cgcatctggc gcaggtattg cttaatggaa   360

tgcaggtagt aaagcagtta aatggaatac tgcaactaca ccagtacaat taattaacgg   420

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<212>    DNA
<213>    Proteus mirabilis

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gtactattta gatattcgtc taaatggtcg cgactttcct cgccaaaata ttaattatat     180

tgaagtagca gataatcatt ccgtggcttg tatcgaccct actcttttaa aaaagttaac     240

aatcaaccaa gaaaaccaaa aatatatcaa acaaatatca ccagattgtt ttgatattag     300

ccaattaccc ggtatctcga ttaaaaatga tggtggtgta cttgatatca cgttaccgcg     360

ctcattaatg aaatatgaag aatctgattg gacacctccg gagctttggg atagcggggt     420

ctctgggctt atttttgatt atacactaac aggaacgtca actcgcccta ataaaggcaa     480

taataacaat acgttaactg gttatggtca agcgggatta aacttgggtg aatggcgttt     540

acgagctgaa tatcaaggca attattcttc tgaatattca tctaacaatc gttttgattg     600

gaaccaaatt tatgcctata agccattacc tgatctcgca gctaaattaa cggttgggga     660

aacttattta aactctcaaa ttttttgatag tttccgtttt acaggagcca atttacaaag     720

cgatga                                                                726


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<212>    DNA
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atcgtgcatt aacctatttt aaagcaacca ctgatttacc tcctgttggt aataacttt      180

atcaattaaa tgagtatgtt gatatcaaaa ttaattttga aatttggggg cctaatcctt     240

tacccacagt gccctttct gacataccta ataatagaaa taaccaacaa ggttgcagag     300

taccctcttc acctaaaccg catatttcct caggaagtag cggtcaactc actttccgtt     360
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taagaaaacc cattattaat ggtgtcagtc ttaatgggca atctcttgca caaatgtatg      420

ccatggtaag tcacagcggt gcgccaaaaa cctatggttc agagcccatt tctaaattag      480

tgatcacctc ggggatcatt accactaaag ataaatgtat ttttaataat ggttcaccaa      540

ttacctttga ctttggtaat gtgggaaa                                        568


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<212>   DNA
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taatgagaaa gagctactga tgttggcttc ttctgtagaa gttggctctc atcaccctct      120

tgcaaaagcc attattaata aagcacaaga gcaacaaatt gatgttgtgg aagccgataa      180

tcgcaaggct ttagcgggta aaggtattga aggttattta ataatcagc atattctggt       240

cagtgcccca acacaattat cagaaaccat accattatct gcacaatggc aacaacaagt      300

cgctcgtctt gaagatgaag gcaaaaccgt tgtggtggta ttaaaagaag atcagttcat      360

tggtgtgatt gcgatgcaag atacattgcg caacgatgct atcgaatcaa tgaaagagaa      420

gaaagtgttg aaatcgatga atatcaatgc cgtgatgtta accggtgata acccaagagc      480

agcggctgcg attgcacaaa aactgggtat ggatttccgt gcaggattgc tccctgaaga      540

taaa                                                                  544


<210>   737
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<212>   DNA
<213>   Proteus mirabilis

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ttatggccat atcccttttt ctatatgctt atagctattt tgatacttgg ctagaaagta      120

aaaaaaatgc cattaacaac acgactaata agtttgcatc tcaagttgaa gattaccgct      180

atcacgctaa ccaactattc cagttatcaa acaaaattaa tgatccaacc ctctttctgc      240

ctttaaaaat caatccggtc aaactacgct ctgatgttta ttggcttgaa ggacgcgatc      300

agaccgttga tgctattgtt tttggtaaat cgaatgaaca aacctttcag ttagccggtt      360

attttgcaaa cgcgttagaa attatttggg gggtacgtaa taactatagc tctctctatt      420
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atcttaatgg taaaggcaat gatcttatcc ttattactac ccactcaata ctaaaaccag      480

aattgcgtta taaagaaagc tatttaacac taacggctga aaacaaacgt tctgagctat      540

taatgcaatc aacggcatta gatgaaaaag agagcctttc tcccattagg aaaatgccga      600

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cgcatttgct gtaacgccaa taataggaat agtgctactc aattcacgca ctgttgtcgc      120

taattgatag ccattcatat ttggcatatt gacatcggtt aaaataatat cgacatgatt      180

ttcttgcata aaggctaaag catcacagcc atcttctgcc gttgcggtat taaaaccaat      240

ttttttcagt tgatcggtca acaataaacg attgataggg tgatcatcaa caatgagcac      300

cgtcaataat tgtagatcgt gatctgtcat taacgcgtta ttttctgagt catcagactc      360

taattttgtt tgtggtaatt gtaggataat cttaattaat tcatttaatt tatatgtact      420

gcataaccaa ttattttcag agattttctt tgctggctca aaatagtgtt cataaatacg      480

gataaattgg caagagttat ctaaacattc atcatgatcg gtgataataa aatcattctc      540

agatacctga gtcacttccg tgaataattg acaatgtaag cccacataac ttagatatcg      600

ttcaacaaag ctttctagat agagattttt aatactgata aagcagcgaa tagtactctc      660

tttatagaga ttatatttgg tttgtccatc actcgaatt                            699
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<212>  DNA
<213>  Proteus mirabilis

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tgttgatgat ttagtcgcgc aaattaaaga gattgtgggt tcacttcctg tttatttgac      120

ttttgatatt gattgccttg atcccgcatt tgcaccgggt acaggaacac cggttgtggg      180

gggattaacc acggataagg cgctgaaaat gctgcgtgct ttacagccgt taaatattgt      240

aggcatggac ttagttgaag tatcgccagc gtatgatcaa tcagatatta ccgcccttgc      300
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cggagcaacc attgcacttg atatgctata tctgcaagcg g                341
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<211>    323
<212>    DNA
<213>    Proteus mirabilis

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ggatttgaac gctggcaaaa agccattgat atggcggctc atttaggtgc cgatgcatta     120

attttggccg atattgctat gctagagtac gcagctgaac gctatccaca gatagagcgt     180

catgtatcgg tacaggcgtc ggccactaat actcaggcaa tcgcatttta tcaacgcaat     240

tttgatgttg cacgtattgt actaccacgc gttctttcta ttcatcaagt caaacaattg     300

gctcaaagta gtcctgttcc ttt                                             323
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<210>    741
<211>    360
<212>    DNA
<213>    Proteus mirabilis

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tcggcaagca aaacagagcg atgctgatat tatctactta ggcgaaacag tctgtagtaa     120

gcgccgtgag actaaaccac aagattggat taatctggcc aaagaagtgg ctaaaagtgg     180

taaacaagtg atcctttcta ccttagcact actacaagcg ccttctgaac taaaagagat     240

agcaaagctg gtggataacg gtgaattttt agttgaggct catgattttg gtgtgatcaa     300

tatgctttat gagcgtcatt accttttgt agtaggccat ggattaaact gctataacgc     360
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<212>    DNA
<213>    Proteus mirabilis

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caaaatccgc attaacctcg attggcatcg agaaagtaaa agcggtggtt ccgggttatt     120

aggtggatta tttggtggta acaaaggtat tgatttagat attggcgcct ttgttgaact     180

acaagatggt tataagtcag tgatccaagc cttaggaaat ggattcggtg attttaatcg     240

catgccttat gttgagttac aaggtgatga tcgcactggt gatgtagcgg tggcgagtg     300
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gatttttatc aatggacgtg aatggaaaaa tatcaagcaa gtgcttattt ttactttttat    360

ttatgaaggg gttcctaact ggagtaaaac agatggtgtg gtcactattc atgttcccga    420

gcaaccacct atcgaaacac gtttaacgga tggtaataat ggtcgagcta tgtgtgccat    480

tgcacgactt attaatgaaa acggatcaat caaagt                              516


<210>  743
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<212>  DNA
<213>  Proteus mirabilis

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cggacttggt tgggatgccc gttctacaga tggtcaagat tttgacttag atgcatctgc    120

atttctgtta gccgctaatg gaaaagtacg tagcgatgcc gatttcattt tttataacaa    180

cttaagatct tccgacggct ctgttgttca cactggtgat aaccgaacag gtgaaggtga    240

tggtgatgat gaagcactaa aaatcaaact agataccatc cccagttatg tcgaaaaaat    300

tatctttgta gtgactatcc atgaagcgca accgcgtcgt caaagctttg gtcaggtatc    360

tggtgcgttt attcgtttag ttaatgatga caaccaaatt gaagttgctc gttatgattt    420

aacggaagat gcatcaacgg aaacggcgat gttatttggt gagttatatc gtcataacgg    480

tgagtggaaa ttccgtgctg taggccaagg atatgc                              516


<210>  744
<211>  500
<212>  DNA
<213>  Proteus mirabilis

<400>  744
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aagcgctaag acagccaacg gttggctcac gttatactct ttttaatatt acacccgata    180

tgccaacgcc aggtggcacg agtcctgttg gtactaaagg aattcgctat attgcgatga    240

aatatggccc ttatggacaa cctgaacact ataaaaccta ccaagtgatg ttctctcact    300

attccaccac cactacacgt aaagttcgtt atttaggtga gttatatacc gttgtcggtg    360

atatttattt aatcgatcct gctgctacca ccaatgaatg gcaacgcggt cgtagccaaa    420

tagttgaaga gtattatgag attttagata cacatggaaa taggacaggc aaaggattgc    480
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gttttaaccg ctgggataga   500

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atggggtaat tagtgactat ttgtcctatt ttggcacctc taagtttтct gctgggtatt   120

cgttacaaaa ctttcctgaa atacccacta aaggtgaagt cgttacgaca ctgcgtaata   180

ttgttaatcg gtttgcggga tcatcagagg ggatcaatca ttggcgctat tacattgatg   240

cggtagagat ccatattcct ccattactgg tgccttatct gcaacaagaa aatgtcctcg   300

atgtcgtttg tactccttct atccccattg tcattggtgt gaatggccat tttcttaaag   360

atgaaaaatc acatttttct gcgttaagtt taaaacaact ttctgaaccc atactgtcaa   420

atggcacttc cactatccag aaaaatgaag gtgatgcggc gcatttatta catattcgcc   480

aagaaaccaa cgaagagtat cggttacacc attcttcagg tttttggaat ggttcgttaa   540

tttgcttagg   550

<210>   746
<211>   401
<212>   DNA
<213>   Proteus mirabilis

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tcctttgctc aagtaaatca cgatcccctg accaaatgtt atgagttgtc aacagatgca   120

agccaaacaa ccattaaatc ttgtctatta gatgaactga gattatctga agagcagttg   180

aatgttatct ataataaaag caaaggcgac cttgaagata gtgactctat cgcggctaaa   240

agtgctattg atgcattagt cagttcacaa gagcagttta ttctttttag aagtagtgaa   300

tgccaacgtc aatctgcttt aatgatgggg ggcaatggtg ctgatgaagt actgctggct   360

tgtgaaataa aattaaatca atggcgagct aaattattac t   401

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<212>   DNA
<213>   Proteus mirabilis

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tgacaaattt tttcccgacc aaaccgattg aattacatac cttagtactg tctgaaactg       120

aattacaatc tgtgttctct ttactcaaac cattaataaa atcaggggcg ccgattactc       180

gtcatcttcc agattatcat ctatcaacac ctgaggtggt taaaactaat tttacgttac       240

ttcagcaatg tctaccgctt gaacatggca cccccctctca agagaccctg tttatgcaac      300

agagcctctt ttttattttg ctggcggttt atcacgaagg ggtcgatatt cttaatattt       360

ttcgttttaa ttatgatgag ccaaaaaatc aggcgatcac tcatctaata acacaagatc       420

cgcaacgtaa atggcattta gaggatgtag caaaaacgct ctatactaca ccatcaacat       480

tacgtcgcca tttaagtaaa gagggcgttt cgt                                     513


<210>   748
<211>   583
<212>   DNA
<213>   Proteus mirabilis

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ggcgattaag tccggtaacg gtagaaaatt accagcgaca attaatgacc attgcacaaa       120

tgatggttgc aataaaaatc aaccaatggt cgttactgga aagccaacat gtgcgcatgt       180

tattggctaa aagccatcgc agtggattac aacctgcaag tttagcattg cgcttttcag       240

cattgcgtag cttccttgat tggcaagttt ctcaaggaat gttagcagta aaccccgcca       300

aaggggttcg aacacccaaa tcaggtcgtc acttgcctaa aaatatggat gttgatgaag       360

tcagccagtt gatgaatatc gacttaaaag atcccctctc tgtaagggat agaacgatgc       420

tggaagtgat gtatggcgct ggattacgtt tatctgaact gactaactta aatatcaatg       480

atattgatct ccaagaaggc gaagtccgag tattaggtaa aggcagtaaa gagcgtaaag       540

ttcccttggg aagaaaagct gtagagtggt tacagcattg gtt                         583


<210>   749
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<212>   DNA
<213>   Proteus mirabilis

<400>   749
caggaacggg tttcttatca tcaataagat gtctaattgc taaataggga tgataaatta        60
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gcattcgagg cccagcccaa cgcatgactt gtttcattgc tgctcttttt actggctgat        120

agcagtgaat tgggcattgt ttgcaggcgg gttttttcctc accatagcga catttatcta     180

gtctttata agc                                                             193


<210>  750
<211>  520
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<213>  Proteus mirabilis

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caaactcagt ttaacggcgt taaagtactg agcggtgaga atcagaaat ggttatccaa        120

gttggtacta acgataatga aactatcaaa tttaacttag ataaagttga taacgataca       180

ttaggtgttg ctagcgataa actgtttgat accaaaacag agaaaaaagg tgttacagca       240

gcaggtgcgg gtgttactga tgctaaaaaa atcaatgcag ctgcgacact ggatatgatg       300

gtatcactgg taaaagaatt taatcttgat ggtaaaccag taactgataa atttattgtt       360

actaaaggtg gtaaagacta tgtagcaact aaaagtgatt ttgaattaga tgctacaggt       420

actaaacttg gattaaaagc atctgccact acagaattta aagttgatgc aggtaaagac       480

gttaaaactt taaacgttaa agatgacgct ttagcaactt                              520


<210>  751
<211>  515
<212>  DNA
<213>  Proteus mirabilis

<400>  751
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tttcaccttt ttgggtgatc actaaagtcc gtgttttgcc ttcacctaat gtttcaccaa       240

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ttacagagac cgtataatta ccaatgcttg ctttaccatc agtggttact ttaaaggcat       360

caaactcatc atcaactttg gtggcgacga ttttatcgaa ttttttttaat tcttcagatg       420

ctttctgtaa tttatctaat tggctacgaa ttttttccata tgcagtaatt tgtgcatcgt       480

agctttcat ctgtttgtct aaaggttcaa ggcgt                                    515
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<211>    274
<212>    DNA
<213>    Proteus mirabilis

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gctgatcatt tgcagattga gttagcagaa taccggcaga tcctattgga tacaaataac     120

agccagttgt tctcttatga cgaatggcat gaaatttacg gtgaaagctg tgaaccgtct     180

caagacgaag atcacgatga caatccttta caaatgttat tggaaagtga tatacgccaa     240

agagtcatag acgcgataga attgcttccc gaaa                                 274


<210>    753
<211>    657
<212>    DNA
<213>    Proteus mirabilis

<400>    753
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tttactggac aaaacacctt ctcacaacat tttgatattc tctcttcaca aaaacccgtt     120

tcagcattag atagctattt ctttggtagt atgcaatcgg gtcgtatccg cattattaat     180

acggctgaag gtagtggagt taaattagca ggtaaattta ccgcagataa cgacctaagt     240

gttaaagccg ataatattca aacagatagt caagtccgtt atgacagtta cgataaagat     300

ggcagtgaaa attaccaaaa ctatcgtggc gggatcacgg ttaataatag tggctctagt     360

caaacactca ctaaaaccga attaaaaggt aaaaacatca cattagtagc gagtagccat     420

aatcaaatca aagcctctga tttaatgggg gatgacatca cgttacaagg tgctgattta     480

actatcgatg gtaaacagct acagcaaaaa gagaccgata ttgataatcg ctggttctac     540

tcgtggaaat acgatgtgac taaagagaaa gaacaaatac agcaaattgg tagccaaatt     600

gatgctaaaa ataatgcgac attaaccgca actaaaggag atgttacctt agacgcg        657


<210>    754
<211>    622
<212>    DNA
<213>    Proteus mirabilis

<400>    754
attaagcgca aatgaaacag gaaatttagg ctcaatcagt gaatcaaggc gtgcattgca      60

agatagccaa cgtgaaatta atcaattaat agaacaaaat cgctatcagc aactgcaaga     120
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aaaagcggta aatatttcac ctaccccaac tttaattact gagtcagaac actgtttgcc      180

tataaaggc gtttatattc aaggtattac tttacttact gagaaggatc tcaattcatt       240

atctccgtta cctgatcaat gtattaagag tgctgatatt aatcgcctcg taaaagaact      300

cacacagcgt tatcttcaac atggttatat taccgcacgt atccaatttt tacgtcctaa      360

ccaacatggc gaattaggtc tgtatgctat tgaagggttt gttgaacgta ttgaaggggg      420

tgatcgaggt gttaacacca cactactatt tcctcgaatc aaagggcaac cattaaaact      480

cgctacactc gatcaaggct tagatcaagc taaccgtttg caatcaaata aagtcacagt      540

ggatattctt cccggtaccg aattgggggg ctctgtcatt aagttgtcta atcaacgaaa      600

atcaccttgg catctcaata tc                                               622
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<212>   DNA
<213>   Proteus mirabilis

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cgctgttcaa tgcttaattc cattgaagcc agagctccaa ttctggatta taggataatt      120

gaatttgcat ttaatgaggt tcctgataat tttaaaatta gaaatggaat gaaaaaattc      180

ctattgaaag atatatcaaa aaaaatatta cctaatgagt ttgattttca gaggaaatta      240

ggatttaatc taccactagg tatgatgatc agagagggaa aatggaagga atttttcggt      300

gatatattaa attcaaaatc tgatataatt aattattatt tttatactaa aatgtttgat      360

gagcatttaa gtggtaaaga gcgtgcagat cgtctatttg gcgtagtttt atttctaatc      420

tgggcaaaac ataataaagt atcgctatga                                       450
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<212>   DNA
<213>   Proteus mirabilis

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agatcaaggt catggtactg ttaaatttgt tggttcaatc attgatgctc cttgctcaat      120

tactcctgat actgaaaatc aaacagttcc actaggtcaa atttctactg ctgcattaaa      180

agatggtggc cgtagtaatt ctcgtgactt taaaatctct ttagaaaatt gtactacaga      240
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gacttacaaa actgttcaaa caactttcac tggctctgaa gcaactgaag ttttagaagg        300

ttctttaggc attgaaggta tcgctaaaaa tgcagctgtt gttatcaccg atgcgggtgg        360

taaacaaatc aaattaggca ccccaagtgc tgctcaaaac                              400
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<211>   500
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atgtaaaaca agataaaaac atgcatcagc gatttgggtg gctcaatcta caaggaacca        120

tattagagcc gtcatgtgca atatcagcgg gaagtagtga tcaagtgatc ccgctaacga        180

cggtatctat cccaacgtta gtcactgaag gtcaaggacc gattgaatat ttttctatca        240

gattaacgga ctgtacgcta attagccaga aagggcaaga agcggataat ccacgtttta        300

tcgcaacgtt cgatggtcct tctaatggaa atggcaactt tgagttatcc ggtgaggcca        360

aaggtgcttc attagcgata gcggatcgtt atggtcgaca agctattcca ggacaacccc        420

taccgcccgt tggcattgat tcgcagtcaa tggcattgct gtaccaagct cgaatagtca        480

aaaataacga tacgccaaaa                                                   500
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<210>   758
<211>   546
<212>   DNA
<213>   Proteus mirabilis

<400>   758
gatggtaatg ctgataataa caaagaactt tataccatta tgtttagtaa gcaatttcct         60

gactggggat tgagtactta cttaaactat agtcaccaaa catattggaa taagccaact        120

aatgataatt acaacttatc gttagcgaaa agcgcggata ttggtcgttt taaaaatatc        180

aattttagtc tctccgcttt ccgtaataaa tttaatggca ccaatgataa tggcgtttat        240

atgaatgtca gtatgccttg gggtgatcgt gcgaccatca gttacaacac tgtcattaat        300

aagagcggta actctcataa tgtcagctat tacgatcgaa ttgatgacaa tagcagttat        360

cgtgttggcg ctggggtaag tagcaatggt aaaccttcag ccgatgctta ttttatgcat        420

tatgctgatg cggccttagt caccgccagt gcaagtcata tcaatggtga atatacctct        480

gccactttat cgctacaagg tggtgccaca cttacgccga aaggtggagc attacaccgc        540
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gttagt                                                             546


<210>    759
<211>    320
<212>    DNA
<213>    Proteus mirabilis

<400>    759
caatctatgc ctcgcaaacg gatttaacca atccttggca agagcagatc actttaacta    60

aaaaaggtga tcgcttcgaa gtgaataatc caacgcctta ctatgtgaca ttagtcgatg   120

gattaaccag tttgaaagga aaaagcttgg atggctttga accattaatg atcgcaccta   180

aaagtagcgg cacgataaat ctgagtgctt ccatgtttgg tgcttcaccg gtattgagct   240

acatcaatga ttatggcggt cgccctcaga tgaaattcac ctgtagtggc aatcaatgca   300

aagtaacaga aacggcagct                                              320


<210>    760
<211>    507
<212>    DNA
<213>    Proteus mirabilis

<400>    760
aacagtggtt tagcccaagc aaggcagtgt tggttttttat tctggcaaca tttactggag    60

gcctgagttc tactgctgtt gctaacttac ctgcaggagc agtaataaga gcgacccccg   120

ggattgttta tatcaatatt actggaaacg tcatcgctcc acctccttgc ttaatcaatg   180

acggcaagat gatcgaggtg aattttggcg aagtaatgag tacgcgtatt aatgatagca   240

attataagca acctatcgaa tataccgcga cttgccaaaa aagaccgact aacgccatga   300

aagtctatat aacaggtaat gcaacagggt tcgatagtaa tgccctacaa actaatatta   360

cgggattagg ggtacgcatt ctttatcaag gtaaattatt aggattaggc tcagcggtta   420

aatttaccta tcccaatttg cctaaactag aagcgatccc tgtgcgtgat aatagagaaa   480

cactagttgg tggagatttt gttgcca                                      507


<210>    761
<211>    451
<212>    DNA
<213>    Proteus mirabilis

<400>    761
ttactaaatt ctacagcagt aatggcggcc gactcgccta atttaaaatt attcggaaca    60
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ttattagtgc cacctccttg tgttatcagc aatgacgaac gaattgaggt ttttttttggt      120

aagaacgtcg gtattaataa agttgatggt attaactata ccgaatcggt gaattatacc      180

ttggtatgcg acgctaattt aaaaggttgg gatttgggat tatcaattat cggacctaaa      240

acccagtttg atgaggcggc attgcaaacc aatattccag atttaggtat tcatttaact      300

caagatggta agccttttaa gctaaatgag cgtattggga tttcaccaga ttcgcctccg      360

gttattcaag ctgttccagt aaaaagaccg ggaagtacat tgcctgaagg ggcatttgaa      420

gtctcagcca ccttattagc agaataccaa t                                     451
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<210>   762
<211>   526
<212>   DNA
<213>   Proteus mirabilis

<400>   762
ccggttcata ttgggtctat ctgtatccat agggttaact tcagcggctt ttgcaatacc       60

ggacaacctc tattttcacg gcatattagt tgatgagcct tgtaccataa aaccgggtga      120

tgaaaccgtg gtactcgatt ttggcaatat tcctgataaa aacctttatg cctataaaag      180

aacgccaagc aagttatttc aattacgtct gtcagaatgc gatctctcaa tcggtaaaag      240

cgtcaaaata acctttaaag gagaggaaaa ccaagcaatg gcaggagaag gattttttggc      300

aataagtccg ggcagccaag cttctggtat tgcggtggga ttagagtctg aaaatggtaa      360

tgctctacct ataaataaag aaacagacaa gatgtcatta actgcgggtg cactattttt      420

gaattttat gcctttattc aaggtgagcc ggatgcgatt gcgaataagt cgattaaacg      480

tggtcctttt agtgcaatag ccaccttcta tttgaattat gactga                   526
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<210>   763
<211>   505
<212>   DNA
<213>   Proteus mirabilis

<400>   763
ccttctaacg ccacttacac ttatgttatt gagcgttggg atccagaaac ctcaggaata       60

ttaaatcctt gttatggttg gcctgtgtgt tatgtcacag tgaaccataa acatacagta      120

aatggtactg ggggaaatcc tgcattcag attgctcgaa ttgaaaaact acgtacttta      180

gctgaagttc gtgatgtagt acttaaaaat agatcattcc ctattgaagg gcaaaccacc      240

cacagagggc cttcattaaa ctctaatcaa gagtgtgtgg gattatttta tcaaccgaat      300
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tcaagtggta tatcacctcg aggaaaactc ttaccaggtt cactatgcgg tatcgcacca     360

ccaccagtgg gtgcttgtaa aatatctgaa ggtgcggtga accttaacta tggtgatatt     420

gatgaagcta gtttaagtgg tgctaagcgc tctgaaacaa tcaatgtaac ctgtaattta     480

gcaatgaaag tgttggttat cgcat                                          505
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<210>   764
<211>   408
<212>   DNA
<213>   Proteus mirabilis

<400>   764
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ccataaactt gttgacggga aattggtccc gttttttgtg ataaaaatac ccattcagaa     120

tctgattctc tccagttttc tctacttttc aaccagttgc ataaggcttc atattcctca     180

tcaataatag gttgtgttgt tgaaagccca cctttaaac gcctgacata gagtattcta     240

ctttctagat caatatcgct taatgttaaa ttacatagtt cgctaacacg aaaaccatgt     300

aaaaaacaca ttaaaaacat acagtaatct ctttcgggat acctaccttc cttagcttgc     360

tttaaaatag cattcacttc aaaacgtgta agaaatttac gttgcttc                 408
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<210>   765
<211>   310
<212>   DNA
<213>   Proteus mirabilis

<400>   765
ttgattttgc gaatatagat gtaaatgctt ctgtaggtaa aaagatccaa aaaaaacgta      60

aagagctggg ttataccggt atgcagctgg ctaaaaaaat tggtgtcagc cagcaacagt     120

tttctcgcta tgaacgaggt atgaacaaaa tagatctcag acatttagtg ttgttagctc     180

tctatttaaa tacacccatt tattggtttt ttgaggattg ctacgtaaaa aagccttcat     240

taaataataa aggaatagat aagcgcaatt atgttattgc tcaagcaaca cctgatgctt     300

ttcattattg                                                          310
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<210>   766
<211>   510
<212>   DNA
<213>   Proteus mirabilis

<400>   766
tggagtatca gagctatttt gtttaagcct ttttttggaa atattggact ttattcctat      60
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cttggaaaac ctatattctt attgggtatc aaaaaagtat ttttaggacg tagagttaga      120

attttccctc actctagaat tgaagtgcat ggaaataaat tgtatgagga taatatctct      180

ataggacagt catttcatat aatatgttca agtaatatta ttatatctga aggtacatta      240

atctctgcta atgtatttat tactgatact gatcatacat ataaaaatat ttctctaccc      300

attcatgttc aaaaaactaa tatttctacc acttatattg gtaaaaattg ttttatagga      360

tatggcgttg ttattcaagc tggaacaaaa ttaggaaata attgtatcgt tggtgcaaac      420

tcaacaataa aaggctcttt tttcgataat tcaataattg taggttcacc tggacggatt      480

attaaaaaac tagataaatt atggctgact                                      510
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<210>    767
<211>    934
<212>    DNA
<213>    Proteus mirabilis

<400>    767
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ctatcataag cagaggccat aacgtcagtg accacttgtt ccgttaaggc agaagagtcg      120

acaatcatgg cgtttaagcc acctgtttca gcaattaaag gaacagggcg accttcgcta      180

tcgagtctac ccgctaaggt tttttgcaaa atgtgggcaa cttcggtaga gcctgtaaac      240

atcacaccac gcacgcgttc atctgccact aattgtgcac caatggtctc cccttgaccc      300

ggtaagagtt gtaatgcact gcgaggtact cctgcttgat aaaatagttc tacggcttta      360

aaagcaatca gaggggtttg ctccgcaggt ttggccagta cggtattacc tgccgctaac      420

gccgctgcaa tttgtccact aaagatggct aatgggaagt tccaaggact aatacagaca      480

acagggccta aaggacgatg ggtattatta tcaaaatcat ttgccacttg tgctgagtaa      540

taataaagaa aatcaattgc ctcacgcact tctgcaatag cattactata ggttttgccc      600

gcttctctta ctaagacccc cattaatggg cccatttgct gttccatcag ctcagccgtg      660

cggactaaaa atgccgctct ttccgcaggt ggggttgcaa accaaatttc accattttct      720

tgggcaatat ctaaagcaaa attagcttcg gcggccgtcg tttcacgtac tgtaccgacg      780

acatcggtgt gatttgccgg attgagtata gattgtggtg caatcacttc ttctgcacta      840

ttacactcac caccaatgag cggatggctg tgaatttttt ccatcgcaga ggtcagtaat      900

gcactggata atgaggctaa acgatgctca ttag                                 934
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<210>   768
<211>   501
<212>   DNA
<213>   Proteus mirabilis

<400>   768
gcactagcta ctattctttc tgctgcattt gctggctcat ctatggcgta tgacggaaca   60

attacattta caggtaaagt tgttgcgcaa acctgctctg tcaatacaaa tgataagaat   120

ttagcggtaa cattacctac agtatccacc actacattaa atgaaaatgc ggctactgca   180

ggtcttactc catttactat tcatttaact ggttgcgctg ttggtatgga tggtgcacaa   240

agtgtcaaaa catattttga accttcaagt gacattgatg taaccacaca caacttaaaa   300

aatactgcac aaactaaagc tgataatgtt caagttcaat tacttaactc agatgcagca   360

acaacaatcc agttaggtac tgattctgca acacaagatg tccatccagt acaaatcgac   420

aatgctaatg taaacctccc atattttgct caatattatg caaccggaca atctaccgct   480

ggggatgtaa aagcaaccgt t   501

<210>   769
<211>   383
<212>   DNA
<213>   Proteus mirabilis

<400>   769
gaggtactgc atcgcaaacg cagacattga cggttgcaca agagggcttt ttagagtggt   60

taccccaaga gaatatcttt tttcctgatg ctcaagtgtg tttaaccaca catattcatt   120

tagcctcatc agcgaaattt atcggctggg aaatgcagtg tttttggacgc ccagtttttaa   180

atgagtggtt tgaaactggc aaggtaaaag ggcgcttaaa tttttatgtt gatgagagat   240

taattttaac agagtcaatg cgggttgaag cttacaaaa caagctgcc gcaatgcgtg   300

aatttcctat gtttggctcg ctttatattt atcctgcaac cgatgcatta aaagagatta   360

ttcaacacca tttagagaag gta   383

<210>   770
<211>   414
<212>   DNA
<213>   Proteus mirabilis

<400>   770
gcgcttgaac taacctctac agaaaagcca aagttaaccc tttgtcttac catggatgag   60

cgcaccaaaa gtcgcttaaa agtggcttta agtgacgggc aagaagccgg gctatttttg   120

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cctcgaggca ccgtacttaa agagggggat attctgctgt cagaagaggg cgatgttgtc      180

accattgaag cggctaaaga gcaagtatca acggtttata gtgacgatcc attattgctt      240

gctcgtgttt gttatcactt aggtaaccga catgtaccat tgcaaataga agcgggttgg      300

tgtcgttatt ttcacgatca tgtattagat gatatggctc gcggcttagg ggctacggtg      360

gtggttggct tagaaaaata ccaacctgag ccggggggctt atggtgggtc atcc          414


<210>    771
<211>    500
<212>    DNA
<213>    Proteus mirabilis

<400>    771
gctcagcaga aaccttgtca gattggttaa gcgcacaaat gaccggaaca ttagccacac       60

tcgagcttcc tatattgcgg caattacaaa cgagtttggc aaagggtgat agcgatacag      120

tgaaatattg gtgtgacttt atggtcgcaa gtcgcgaaac caaagagtta aggcaggaag      180

agcgtcaacc ggggatcgct tttccccgtt tacttcctca attaggcatt gaattagacg      240

atacgttaca acagcgggtt aaacagacgc aattaatggc gtttgcgtta gctgccgtgc      300

attggcatat cgatagtgaa aagctctgtt gtgcctatgt ttggggctgg ttagaaaata      360

cggtgatgtc tggggtaaaa ctggtgccat tagggcaaag cgcagggcaa aaaatgttgt      420

ttgctctagc tgagcagatc cccgctattg ttgagttatc ggcacattgg ccacaagagg      480

atattggcag tttacgccag                                                  500


<210>    772
<211>    560
<212>    DNA
<213>    Proteus mirabilis

<400>    772
gggatcttct ataactattc aaccaaagta ttaccttctt ttgattatga taccgcagga       60

aaacatatag cccgtgaaga ttccacttgg aatggcaaat atgttattgg caacccgct      120

gaggtgactt attcattccc aaaatgggaa ggcaaatttta atcaatttgg taataagaat      180

ccttatgaat ttaatgaatt acaaaaagag catgcaagaa aatctttaga tgcatggtct      240

gatattgcaa atattaaatt tactgaagtt gctgttggga atgttgatgg aatgaaggct      300

tctgacgtaa aaacagatat tacttttggt aatatctatg atcccaatgg cacatttcag      360

gcttatgcaa cattgcctaa tacctatgct tatggaaaag atctttctgg ccaagcatgg      420
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tttagtgatt atcattatgc aggtaatact acaccagaat tgggtaatta tggtcgttta    480

actattatcc atgaaattgg tcatacactg ggtcttatgc atcctggtga ttataacgca    540

ggtcagaatg ttccaggtta                                                560


<210>    773
<211>    509
<212>    DNA
<213>    Proteus mirabilis

<400>    773
tttctttgat ctaccttggt tccctattta ccttttagtt attactttat ttaatccttg     60

gttaggatta tttgcacttt gtggtgccct tatcttattt gctttggcta tccttaatga    120

atatctatct aaaaatcatt taaaaaaagc gaatagtttt gccaatcaag cacaattaat    180

acaaagtcat catttagaac atccacagac tatcgaagcg atgggaatgc ttagtcaatt    240

acgtaaacaa tggcaaacct ctcatttcaa atacttacaa gcacaaacac aagccagtga    300

taatgcagcc ggtatcaacg ctatcacaaa agtaacacgt atggcattac aatctttaat    360

gctaggttta gggggatggc ttgctattga taatactatt agtcctggaa tgatgattgc    420

aggttcaata cttttaggtc gagcattagc ccctattgag caagtgatca atgtatggaa    480

aagttgggat agtagtaaag cagcctaca                                      509


<210>    774
<211>    576
<212>    DNA
<213>    Proteus mirabilis

<400>    774
aagaacaagt agcaggtaaa gagtatgaaa atatcgggtt atcacaattg ctacccaata     60

tttctgtcaa ttacaaaaat aatcctcgca actggcaacg taaggcttat ccaataaata    120

tatttcagga taaaataaca acagttgagt atcaaaacta tcaaagctat tctgtcaacg    180

cgattattag tcaaccacta tttgactaca ccgcatttag tgaatacaaa gcttctatca    240

ttaaaacatt attagcagac agtcattatc aaaataaatt ttcagaatta attattcgac    300

ttatcgataa ttatattcaa gttgcttata cacaagataa attattacta aatcaagcac    360

agcaagaaat ctatcaaaaa caactagctt caagtcaacg cctatttgag ttaggagaag    420

gaaccaaaac agatattgct gaaatagaga ctcgtttata tttaacccag tcacaatata    480

ccgatcttca attagaaatt gaaaaggcta aaaacaaact cagtgctatg atcggttcac    540
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aattgcctac tcatgagcac atcgcaaagc taactg                              576


<210>   775
<211>   626
<212>   DNA
<213>   Proteus mirabilis

<400>   775
ccaacttact tctatctacc tgatggtaaa attgttataa attatatgta tggttggcct     60

aaacaaccac atagtaatat caccaaaata aattatatat tccctgatta tgataaaaaa    120

agaaattact caaataaaaa atattcagta acagaaaaag atagaataga atcaataaaa    180

cataccgcta aagtatatga attgacctat cttaaggaaa aaaagaaaa agaaatcgct      240

tcattaaaat attatagaaa taaatattca ataagtagaa tagctgaatt agaaaaagat    300

atagaggata tagaaaatag tattattttt cacaagaata gtatacatcc gtatttttac    360

aatacacaaa caaccatata tcctcatcaa caagaagtta tttccgatat tcttagtgaa    420

attgcccata taacacaagc aaagtttgtt gcatctaatc cagaattcga tgccgatata    480

aaatttggtt tttacgatga ttttcatatt agtcatggtt caatagaatt ttcatatacc    540

accagaggtt ttgcaaccta ccctagcaga tattcaaccc ctataaaaaa gataaatatt    600

gatgaacaat accaatactc tggaac                                         626


<210>   776
<211>   583
<212>   DNA
<213>   Proteus vulgaris

<400>   776
catcttattg tgggtccaag cctacagcaa tttaataaag tattagctta tgagatacga     60

actttcatcc ccgaggagct cattttagtt gatggcactc cgcttaaaat ttccccagct    120

ctgcgtaata aaatctacaa tgaattaggt atttcctttt ttgataaaaa aacagcatta    180

aaagaagggc ttcattgggc gaaagaagat gatgagctta gccaacagat gtctgaatac    240

cttaatggtg aaaccgtaat ttggattgag agcacactgg aatatcctgt tttatggatt    300

aacacctata tttcaccttc tttatggatc cgggttccac tcactgaatt aggcgaaaat    360

ttcttactgc cagtttatcg ccaagcaatt attttttatta ttattgttat tgccttttttc   420

tggttatata accgtttttca aaatcgccca ttaaacgaag tggaatatgc agctcgtcgt    480

attggtaaag gcgttattcc tccccctatc ccagaatcag gttcatcaga gatgcgttcg    540
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atcattcgag catttaatca aatgtcatca ggtattcgct ctt                      583


<210>   777
<211>   383
<212>   DNA
<213>   Proteus vulgaris

<400>   777
cgtaagcctt atgttcgtgg tatgcagcca aactggtgga cgaaactcgg tttctatcgt     60

ttctacatca cccgtgaagg aacttgtcta ccacaacttt ggttcagtct ggttgtactg    120

ttcggtgtat ttgcactgaa aaatggacca gaaagttggg cgggattcgt tggattccta    180

agtaacccaa tactgatgct gattaatatt gtgaccctta tcgcaacggt attccatacg    240

gccacttggt ttaagcttgc accgaaagcc gttaatatcg tcgttaaaga tgaaaaatta    300

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ctggcagtgg cgctaattgt tta                                            383


<210>   778
<211>   345
<212>   DNA
<213>   Proteus vulgaris

<400>   778
aatcagaatc aacttcctaa gcgctctgat gaacctattt tctggggatt atttggtgca     60

ggtggtatgt ggagtgcgat tgtctctcca gcaattatta tcctgctcgg tattctaatc    120

ccgatgggta ttgcgccaga agcatttact tacgatcgta tcatggcatt tagccaaggt    180

tttattggtc gtattttctt actgctaatg attattctgc cagtttggtg tgcattacac    240

cgtattcacc atacgttgca ccattttaaa gtgcatgtac ctgctagtaa ttgggtattt    300

tatggtgctg cagcaattat tagcgttatc gcaattattg gtgtt                    345


<210>   779
<211>   534
<212>   DNA
<213>   Proteus vulgaris

<400>   779
gcgaagtaga agagaaagca cagcgcgaag cacaagaaaa agcacagcgc gcagctgaag     60

aaaaagcaaa acgtgaagca caagaggcca agaaacaggc cgaagaaaaa gcgaaacgtg    120

aagctgaaga agcaaaacgt gaagcagcgg aattagctaa gcgcgaagca gcggaaaaaa    180
```

```
ataaagtgaa acaaaacgat aaaccaaaag ctgatgtagc agatcaggat aaagcacgtc    240

gcaatgctga actggctgaa ctgaaacgta aaacagaaga agcacagcgc cttaaagttg    300

aagaagagac gcgcgctgca gcagaaaaag cacgccgctt agctgaagaa aacgctgaaa    360

aatggactgc tgaacctaag gctcctgaaa cagaaagcgc ggactatcat gtaactacat    420

ctcgttatgc tcgtgatgca gaagatgaaa gcgatgcaga agtagaaggt gatcgccgcc    480

gcggtcgtac tgctaaagca cctcgtgcta agaaaaataa ccgccactct gaaa          534
```

<210>   780
<211>   582
<212>   DNA
<213>   Proteus vulgaris

<400>   780
```
agctgatgtt gttgttgttg gtgctggtat ccttggtatt atgacagcaa ttaaccttgt     60

agaacgtggt ttatctgttg taattgttga gaaaggtaat atcgcgggtg agcaatcttc    120

gagattctat ggtcaggcaa ttagctataa aatgccagat gaaacgttct tattacacca    180

tttgggcaaa catcgctggc gtgaaatgaa tgcgaaagta ggtattgata ctacttatcg    240

tacacaaggc cgcgttgaag ttcctcttga tgaagaagat ttagttaacg taagaaaatg    300

gattgatgaa agaagtaaaa atgttggctc agatattcca tttaaaacca gaattattga    360

aggtgctgaa ttaaatcaac gtcttcgtgg cgcgacaaca gattggaaaa ttgctggctt    420

tgaagaagat tctggtagct tcgatccaga agttgcaacc ttcgttatgg ctgaatacgc    480

taaaaaaatg ggtgttagaa tttacactca atgcgcggct cgtggcttag aaacacaagc    540

tggtgtaatt tctgacgttg taacagagaa aggtgcaatc aa                       582
```

<210>   781
<211>   553
<212>   DNA
<213>   Proteus vulgaris

<400>   781
```
ctaaatatgg cgcaggaaca aattactttg atatatccaa agagttatta ccgaagtggg     60

cttgttatat tgccaatgct tcattgatct ttgtattata tatattgatc tatgcttata    120

tctctgcggc gggttctatt atctatgaag catcactgtt atatggtatt aatttaatc     180

tgagagctat attttttatt tttacgatag cccttggtgc tacaatatgg tggggtggcg    240

cttgtgctag ccgtttaacc tcaattttct tattcattaa gatagtatta tttatattag    300
```

```
cgttttcggg tttgtttttt aaagcaaaag gtgatttatt atttagtgca acttttgcag      360

gaaaaagcca attatatctt tatccttta tttttattat cattccttat gccattacct        420

catttggata tcatggtaat gtttgtagtc tttataagct ttataatcaa aacgaaagaa      480

aagtagttaa gagttgtatc attggttgct tgttagcatt agtcatctat ttactttgga      540

tgattggcac tat                                                          553
```

```
<210>   782
<211>   260
<212>   DNA
<213>   Proteus vulgaris

<400>   782
gttcataggc ttcacgtagt tcagcacagt ttttaacaga gtttaaatgg ctaacagggg      60

accaaacacg agaaagctta tcgcctgctt ctgctaatgg ttggcaaagg ttatcctgag      120

taaattgagt attatcagcc agtaattttt caactgtttc acgatatgtg gttaaaactt      180

cgtttagtgc aggaacgaca tgttctggtt tgataaggga aaatgcaggt aatcccgttg      240

tgctaagtaa tggatttgac                                                   260
```

```
<210>   783
<211>   199
<212>   DNA
<213>   Proteus vulgaris

<400>   783
tggctgaaaa tgtcgttaat gatattctaa aatggttaga aacccagtta caacgtaacg      60

aaggtataaa aatcgatact attgcgaaca aaagtggtta ttcaaaatgg cacttacaac      120

gcatatttaa agatttaaa ggctgcacat taggcgaata tgtccgcaaa cgtcgcttat      180

tagaagcggc taaatcatt                                                    199
```

```
<210>   784
<211>   220
<212>   DNA
<213>   Proteus vulgaris

<400>   784
gaaaggactt aaacttaact atccagagtc tgtcgcatta attagttgcg cgattatgga      60

aggtgcaaga gaaggtaaaa cagtggctca attaatgagt gaagggcgtg ctgtattaac      120

agcagaacaa gttatggaag gcattcctga gatgatcaaa gacattcagg tggaatgcac      180

attccctgat ggtacaaaac ttgtttctat tcacgaccct                            220
```

```
<210>  785
<211>  503
<212>  DNA
<213>  Pseudomonas aeruginosa

<400>  785
actgacgctt atttgattga cactccattt acagctaaag atactgaaaa gttagttact        60

tggtttgtag agcgcggcta taaaataaaa ggcagtatct cctctcattt tcatagcgac       120

agcacgggcg gaatagagtg gcttaattct caatctattc caacatatgc atctgaatta       180

acaaatgaac ttcttaaaaa agacggtaag gtacaagcta aaaattcatt tagcggagcc       240

agctattggt tagttaagaa aaagattgaa attttttatc ctggcccagg gcacactcca       300

gataacgtag tggtttggct acctgaacat agagttttgt ttggtggttg ttttgttaaa       360

ccgtatggtc taggtaattt gggtgacgca aatttagaag cttggccaaa gtctgccaaa       420

ttattagtgt ccaaatatgg taaggcaaaa ctggttgttc caagtcacag tgaagttgga       480

gatgcatcac tcttgaaacg tac                                               503


<210>  786
<211>  348
<212>  DNA
<213>  Staphylococcus epidermidis

<400>  786
atggataata aaacgtatga aatatcatct gcagaatggg aagttatgaa tatcatttgg        60

atgaaaaaat atgcaagtgc gaataatata atagaagaaa tacaaatgca aaaggactgg       120

agtccaaaaa ccattcgtac acttataacg agattgtata aaaagggatt tatagatcgt       180

aaaaaagaca ataaaatttt tcaatattac tctcttgtag aagaaagtga tataaaatat       240

aaaacatcta aaactttat caataaagta tacaaggcg gtttcaattc acttgtctta       300

aactttgtag aaaaagaaga tctatcacaa gatgaaatag aagaattg                   348


<210>  787
<211>  530
<212>  DNA
<213>  Pseudomonas aeruginosa

<400>  787
tagctcgtgc atcaaaggaa tatcttccag catcaacatt taagatcccc aacgcaatta        60

tcggcctaga aactggtgtc ataaagaatg agcatcaggt tttcaaatgg gacggaaagc       120
```

```
caagagccat gaagcaatgg gaaagagact tgaccttaag agggcaata caagtttcag      180

ctgttcccgt atttcaacaa atcgccagag aagttggcga agtaagaatg cagaaatacc      240

ttaaaaaatt ttcctatggc aaccagaata tcagtggtgg cattgacaaa ttctggttgg      300

aaggccagct tagaatttcc gcagttaatc aagtggagtt tctagagtct ctatatttaa      360

ataaattgtc agcatctaaa gaaaaccagc taatagtaaa agaggctttg gtaacggagg      420

cggcacctga atatctagtg cattcaaaaa ctggtttttc tggtgtggga actgagtcaa      480

atcctggtgt cgcatggtgg gttgggtggg ttgagaagga gacagaggtt               530
```

```
<210>   788
<211>   322
<212>   DNA
<213>   Proteus vulgaris

<400>   788
acactggctg aattaagtgc tgctacattg caatatagcg ataatacagc aatgaataag      60

atattagatt atttaggcgg tccagccaaa gtcactcaat ttgcacgttc aattaatgat      120

gtcacttatc gccttgatcg taaagagcct gaattaaata cagcaattca tggtgatcct      180

cgtgatacta cttctccaat tgcgatggct aaaagtcttc aagcactgac attaggcgat      240

gcactaggtc aatctcagcg tcaacaactt gtgacttggt taaaaggtaa tacaacgggt      300

gataacagta ttaaagcggg tt                                             322
```

```
<210>   789
<211>   625
<212>   DNA
<213>   Klebsiella oxytoca

<400>   789
ttatctgcaa cactgatttc cgctctgctg gcgttttccg ccccgggggtt ttctgccgct      60

gataatgtcg cggcggtggt ggacagcacc attaaaccgc tgatggcaca gcaggatatt      120

cccgggatgg cggttgccgt ctccgtaaag ggtaagccct attatttcaa ttatggtttt      180

gccgatattc aggcaaaaca gccggtcact gaaaatacac tatttgagct cggatctgta      240

agtaaaactt tcacaggtgt gctgggtgcg gtttctgtgg cgaaaaaaga gatggcgctg      300

aatgatccgg cggcaaaata ccagccggag ctggctctgc cgcagtggaa ggggatcaca      360

ttgctggatc tggctaccta taccgcaggc ggactgccgt tacaggtgcc ggatgcggta      420

aaaagccgtg cggatctgct gaatttctat cagcagtggc agccgtcccg gaaaccgggc      480
```

```
gatatgcgtc tgtatgcaaa cagcagtatc ggcctgtttg gtgctctgac cgcaaacgcg    540

gcggggatgc cgtatgagca gttgctgact gcacggatcc tggcaccgct ggggttatct    600

cacaccttta ttactgtgcc ggaaa                                          625
```

```
<210>   790
<211>   482
<212>   DNA
<213>   Staphylococcus aureus

<400>   790
gaaaattcac gtatgtcatg gaatcataag cattaccctt ttgatgcttg gaataaggaa     60

caagatttaa atacagcaat gcaaaattca gttaattggt acttcgaacg tattagcgat    120

caaataccaa agaactatac tgcgactcaa ctcaagcaat aaattatgg taataaaaat    180

ttgggaagtt ataaaagcta ttggatggaa gatagtttga aaatatctaa tcttgaacaa    240

gtaatagttt ttaaaaatat gatggaacaa aataaccatt ttagtaaaaa agcaaagaat    300

caattatctt cttcattatt gattaagaaa aatgaaaagt atgaactgta tgggaaaaca    360

ggtacaggta tagtaaacgg gaagtataat aatgggtggt ttgtaggtta cgtaattaca    420

aatcatgata agtattattt tgctacacat ttatcagatg gaaagccatc tgggaaaaat    480

gc                                                                    482
```

```
<210>   791
<211>   703
<212>   DNA
<213>   Pseudomonas aeruginosa

<400>   791
acgttctgac tggaggaagt ttttcagcga atttcaagcc aaaggcacga tagttgtggc     60

agacgaacgc caagcggatc gtgccatgtt ggttttttgat cctgtgcgat cgaagaaacg    120

ctactcgcct gcatcgacat tcaagatacc tcatacactt tttgcacttg atgcaggcgc    180

tgttcgtgat gagttccaga tttttcgatg ggacggcgtt aacaggggct ttgcaggcca    240

caatcaagac caagatttgc gatcagcaat gcggaattct actgtttggg tgtatgagct    300

atttgcaaag gaaattggtg atgacaaagc tcggcgctat ttgaagaaaa tcgactatgg    360

caacgccgat ccttcgacaa gtaatggcga ttactggata gaaggcagca ttgcaatctc    420

ggcgcaggag caaattgcat ttctcaggaa gctctatcgt aacgagctgc cctttcgggt    480

agaacatcag cgcttggtca aggatctcat gattgtggaa gccggtcgca actggatact    540
```

```
gcgtgcaaag acgggctggg aaggccgtat gggttggtgg gtaggatggg ttgagtggcc       600

gactggctcc gtattcttcg cactgaatat tgatacgcca aacagaatgg atgatctttt       660

caagagggag gcaatcgtgc gggcaatcct tcgctctatt gaa                        703
```

```
<210>   792
<211>   758
<212>   DNA
<213>   Klebsiella pneumoniae

<400>   792
tcacgctgtt gttaggaagt gtgccgctgt atgcgcaaac ggcggacgta cagcaaaaac       60

ttgccgaatt agagcggcag tcgggaggca gactgggtgt ggcattgatt aacacagcag      120

ataattcgca aatactttat cgtgctgatg agcgctttgc gatgtgcagc accagtaaag      180

tgatggccgc ggccgcggtg ctgaagaaaa gtgaaagcga accgaatctg ttaaatcagc      240

gagttgagat caaaaaatct gaccttgtta actataatcc gattgcggaa aagcacgtca      300

atgggacgat gtcactggct gagcttagcg cggccgcgct acagtacagc gataacgtgg      360

cgatgaataa gctgattgct cacgttggcg gcccggctag cgtcaccgcg ttcgcccgac      420

agctgggaga cgaaacgttc cgtctcgacc gtaccgagcc gacgttaaac accgccattc      480

cgggcgatcc gcgtgatacc acttcacctc gggcaatggc gcaaactctg cggaatctga      540

cgctgggtaa agcattgggc gacagccaac gggcgcagct ggtgacatgg atgaaaggca      600

ataccaccgg tgcagcgagc attcaggctg gactgcctgc ttcctgggtt gtgggggata      660

aaaccggcag cggtgactat ggcaccacca cgatatcgc ggtgatctgg ccaaaagatc       720

gtgcgccgct gattctggtc acttacttca cccagcct                            758
```

```
<210>   793
<211>   680
<212>   DNA
<213>   Streptococcus pneumoniae

<400>   793
cggaactgta taatcccttg aattccgtag aagattctac taatcggcgc gatactgtct       60

tgcagaatat ggttgcagca ggatatattg ataaaaacca agaaaccgaa gctgctgaag      120

ttgatatgac ttcgcaattg cacgataagt atgaaggaaa aatctcagat taccgttacc      180

cctcttattt tgatgcggtg gttaatgaag ctgtttccaa gtataatcta acagaggaag      240

agattgtcaa taatggctac cgcatttaca cagagctgga ccaaaactac caagcaaata      300
```

```
tgcagattgt ttatgaaaac acatcgctat ttccgagggc agaggatgga acgtttgctc        360

aatcaggaag tgtagctctc gaaccgaaaa caggggagt tcgtggagtt gtcggtcaag         420

ttgctgacaa tgataaaact ggattccgga atttcaacta tgcaacccaa tcaaagcgta        480

gtcctggttc tacaattaag cctttagttg tttatacacc agcagttgaa gcaggctggg        540

ctttgaataa gcagttggat aaccatacca tgcagtatga tagctataag gttgataact        600

atgcagggat caaaacaagt cgagaagttc ctatgtatca atccttggca gaatcgctta        660

atctacctgc tgttgccact                                                     680
```

```
<210>    794
<211>    669
<212>    DNA
<213>    Klebsiella pneumoniae

<400>    794
cgtaggcatg atagaaatgg atctggccag cggccgcacg ctgaccgcct ggcgcgccga         60

tgaacgcttt cccatgatga gcacctttaa agtagtgctc tgcggcgcag tgctggcgcg        120

ggtggatgcc ggtgacgaac agctggagcg aaagatccac tatcgccagc aggatctggt        180

ggactactcg ccggtcagcg aaaaacacct tgccgacggc atgacggtcg gcgaactctg        240

cgccgccgcc attaccatga gcgataacag cgccgccaat ctgctactgg ccaccgtcgg        300

cggccccgca ggattgactg ccttttttgcg ccagatcggc gacaacgtca cccgccttga       360

ccgctgggaa acggaactga atgaggcgct tcccggcgac gcccgcgaca ccactacccc        420

ggccagcatg ccgcgaccc tgcgcaagct gctgaccagc cagcgtctga gcgcccgttc         480

gcaacggcag ctgctgcagt ggatggtgga cgatcgggtc gccggaccgt tgatccgctc        540

cgtgctgccg gcgggctggt ttatcgccga taagaccgga gctggcgagc ggggtgcgcg        600

cgggattgtc gccctgcttg cccgaataa caaagcagag cgcattgtgg tgatttatct         660

gcgggatac                                                                 669
```

```
<210>    795
<211>    551
<212>    DNA
<213>    Salmonella typhimurium

<400>    795
cacgatagtt gtggcagacg aacgccaagc ggatcgtgcc atgttggttt ttgatcctgt         60

gcgatcgaag aaacgctact cgcctgcatc gacattcaag atacctcata cactttttgc        120
```

```
acttgatgca ggcgctgttc gtgatgagtt ccagattttt cgatgggacg gcgttaacag    180

gggctttgca ggccacaatc aagaccaaga tttgcgatca gcaatgcgga attctactgt    240

ttgggtgtat gagctatttg caaaggaaat tggtgatgac aaagctcggc gctatttgaa    300

gaaaatcgac tatggcaacg ccgatccttc gacaagtaat ggcgattact ggatagaagg    360

cagccttgca atctcggcgc aggagcaaat tgcatttctc aggaagctct atcgtaacga    420

gctgcccttt cgggtagaac atcagcgctt ggtcaaggat ctcatgattg tggaagccgg    480

tcgcaactgg atactgcgtg caaagacggg ctgggaaggc cgtatgggtt ggtgggtagg    540

atgggttgag t                                                         551
```

```
<210>   796
<211>   557
<212>   DNA
<213>   Staphylococcus haemolyticus

<400>   796
agcttttgtt ttatatttct attggtatta ttttttaggt acatattaaa acgctatttt     60

aattatatgt taaattataa agtttggtat ctaactcttc ttgcaggatt aattcctttc    120

attcctatta aattctctct ttttaaattt aataatgtga ataatcaagc gcccacagtt    180

gaaagtaagt cacacgactt gaaccataac ataaatacca ccaaacctat tcaagagttc    240

gcaacagata tccataagtt taattgggat tcaattgata atatctgcac agttatttgg    300

atagttttag ttattatttt aagttttaaa tttttgaaag ccttattata tcttaaatat    360

ttaaagaaac agtcacttta tctaaacgaa aatgaaaaaa ataaaataga tacgatactt    420

ttcaaccatc aatataaaaa aaatattgtg attcgaaaag cagagactat tcaatctcca    480

ataacttttt ggtatgggaa atatattatt ttgattccta gttcatattt taaaagtgta    540

attgacaaaa gactaaa                                                   557
```

```
<210>   797
<211>   558
<212>   DNA
<213>   Pseudomonas aeruginosa

<400>   797
ttgacgaagg cgtttatgtt catacttcgt ttgaggaagt taacggctgg ggcgtggttc     60

ctaaacacgg cttggtggtt cttgtaaata ctgacgctta tttgattgac actccattta    120

cagctaaaga tactgaaaag ttagttactt ggtttgtaga gcgcggctat aaaataaaag    180
```

```
gcagtatctc ctctcatttt catagcgaca gcacgggcgg aatagagtgg cttaattctc    240

aatctattcc aacatatgca tctgaattaa caaatgaact tcttaaaaaa gacggtaagg    300

tacaagctaa aaattcattt agcggagcca gctattggtt agttaagaaa aagattgaaa    360

tttttatcc tggcccaggg cacactccag ataacgtagt ggtttggcta cctgaacata    420

gagttttgtt tggtggttgt tttgttaaac cgtatggtct aggtaatttg ggtgacgcaa    480

atttagaagc ttggccaaag tctgccaaat tattagtgtc caaatatggt aaggcaaaac    540

tggttgttcc aagtcaca                                                  558
```

```
<210>    798
<211>    421
<212>    DNA
<213>    Staphylococcus aureus

<400>    798
ttaaagaatg gaaccaagat caaaatttaa attcttcaat gaaatattca gtaaattggt     60

attacgaaaa tttaaacaaa catttaagac aagatgaggt taaatcttat ttagatctaa    120

ttgaatatgg taatgaagaa atatcaggga atgaaaatta ttggaatgaa tcttcattaa    180

aaatttctgc aatagaacag gttaatttgt tgaaaaatat gaaacaacat aacatgcatt    240

ttgataataa ggctattgaa aaagttgaaa atagtatgac tttgaaacaa aaagatactt    300

ataaatatgt aggtaaaact ggaacaggaa tcgtgaatca caaagaagca aatggatggt    360

tcgtaggtta tgttgaaacg aaagataata cgtattattt tgctacacat ttaaaaggcg    420

a                                                                    421
```

```
<210>    799
<211>    260
<212>    DNA
<213>    Klebsiella oxytoca

<400>    799
gacaataccg cgatgaataa gatgattagc taccttggcg gaccggaaaa ggtgaccgca     60

ttcgcccaga gtatcgggga tgtcactttt cgtctcgatc gtacggagcc ggcgctgaac    120

agcgcgattc ccggcgataa gcgcgatacc accaccccgt tggcgatggc cgaaagcctg    180

cgcaagctga cgctgggcaa tgcgctgggc gaacagcagc gcgcccagtt agtgacgtgg    240

ctaaaaggca ataccaccgg                                                260
```

```
<210>    800
```

<211>   605
<212>   DNA
<213>   Streptococcus pyogenes

<400>   800
aatcatcctc gtggctttga tcagcattta aaactactgt aataaccctc atttgatttt   60

cgacactagt agctacaaaa gaagcaccgg cttttttaga ataaccaaca aaaagaccat   120

ccacgccttc tcgataacaa ggcatgcctt taagcatgta attataactg taaatggttt   180

gtccagcaaa aatagtggag gatttgctag ataatttcag tacttctgga aattctaata   240

agagatgcct ggcaataaca gctaaatcag tggcgcaaaa acaattttca tcatctggtt   300

ctgtattagg ataagtatta gctcctaaaa aatggttagt taagccagtt gaattgacga   360

cctttgcatc ggaaatgccc cattgtctta attgtttttt cattttgtca acaaatttgg   420

gttcggttcc gcctattttt tcagctaaag caatagcggg gctattggcg ttattaacaa   480

ctaacgcact taaaagttct ttaacggtat attttctctt atcaagagga acattactaa   540

tagtatagtt tgtagtgagt tcataagggt agttagaaat agttacagga ctatcccaat   600

ttagc   605

<210>   801
<211>   713
<212>   DNA
<213>   Staphylococcus aureus

<400>   801
tacagtcatt tcacgcaaac tgttggccac tatgagttaa agcttgctga aggttatgaa   60

acacatttag tgggaataaa gaacaataat aacgaggtca ttgcagcttg cttacttact   120

gctgtacctg ttatgaaagt gttcaagtat ttttattcaa atcgcggtcc agtgatcgat   180

tatgaaaatc aagaactcgt acactttttc tttaatgaat tatcaaaata tgttaaaaaa   240

catcgttgtc tatacctaca tatcgatcca tatttaccat atcaatactt gaatcatgat   300

ggcgagatta caggtaatgc tggtaatggt tggttctttg ataaaatgag taacttagga   360

tttgaacata ctggattcca taaaggattt gatcctgtgc tacaaattcg ttatcactca   420

gtgttagatt taaaagataa aacagcagat gacatcatta aaaatatgga tggacttaga   480

aaaagaaaca cgaaaaaagt taaaaagaat ggtgttaaag taagatattt atctgaagaa   540

gaactaccaa ttttttagatc attcatggaa gatacgtcag aatcaaaagc ttttgctgat   600

cgtgatgaca agttttatta caatcgctta aaatattaca agaccgtgt gttagtgcct   660

```
ttagcgtata tcaattttga tgaatatatt aaagaactaa atgaagagcg tga          713


<210>   802
<211>   715
<212>   DNA
<213>   Staphylococcus aureus

<400>   802
agttgtagtt gtcgggtttg gtatatattt ttatgcttcc aaagataaag aaattaataa    60

tactattgat gcaattgaag ataaaaattt caaacaagtt tataaagata gcagttatat   120

ttctaaaagc gataatggtg aagtagaaat gactgaacgt ccgataaaaa tatataatag   180

tttaggcgtt aaagatataa acattcagga tcgtaaaata aaaaaagtat ctaaaaataa   240

aaaacgagta gatgctcaat ataaaattaa aacaaactac ggtaacattg atcgcaacgt   300

tcaatttaat tttgttaaag aagatggtat gtggaagtta gattgggatc atagcgtcat   360

tattccagga atgcagaaag accaaagcat acatattgaa aatttaaaat cagaacgtgg   420

taaaatttta gaccgaaaca atgtggaatt ggccaataca ggaacagcat atgagatagg   480

catcgttcca aagaatgtat ctaaaaaaga ttataaagca atcgctaaag aactaagtat   540

ttctgaagac tatatcaaac aacaaatgga tcaaaattgg gtacaagatg ataccttcgt   600

tccacttaaa accgttaaaa aaatggatga atatttaagt gatttcgcaa aaaaatttca   660

tcttacaact aatgaaacag aaagtcgtaa ctatcctcta ggaaaagcga cttca        715


<210>   803
<211>   360
<212>   DNA
<213>   Staphylococcus haemolyticus

<400>   803
gccaataagc aagttgaaat atctatggct gaatgggatg ttatgaatat aatatgggat    60

aaaaaatcag tatcagctaa tgaaattgta gttgaaattc aaaaatataa agaagttagc   120

gataaaacga ttagaacatt aatcacaaga ctatataaaa aagagattat aaaacgatac   180

aaatcagaga atatttattt ttactcatca atattaaag aagacgatat taaaatgaaa   240

actgctaaaa cctttcttaa taaactgtat ggagggaca tgaaaagttt agtgctgaat   300

tttgcgaaaa atgaagaatt aaataacaaa gaaattgaag aattgcgaga cattttaaat   360


<210>   804
<211>   300
<212>   DNA
```

```
<213>   Pseudomonas aeruginosa

<400>   804
catgcgtgta aatcatcgtc gtagagacgt cggaatggcc gagcagatcc tgcacggttc      60

gaatgtcgta accgctgcgg agcaaggccg tcgcgaacga gtggcggagg gtgtgcggtg     120

tggcgggctt cgtgatgcct gcttgttcta cggcacgttt gaaggcgcgc tgaaaggtct     180

ggtcatacat gtgatggcga cgcacgacac cgctccgtgg atcggtcgaa tgcgtgtgct     240

gcgcaaaaac ccagaaccac ggccaggaat gcccggcgcg cggatacttc cgctcaaggg     300


<210>   805
<211>   500
<212>   DNA
<213>   Streptococcus pneumoniae

<400>   805
tgaggaaggt agtaagggaa acaatatcaa actgaccatt gatttggcct tccaagatag      60

cgtggatgct ttactgaaaa gttatttcaa ttctgagcta gaaaatggtg gagccaagta     120

ttctgaaggt gtctatgcag tcgcccttaa cccaaaaaca ggtgcggttt tgtctatgtc     180

aggattaaaa catgacttga aaacaggaga gttgacgcct gattccttgg gaacggtaac     240

caatgtcttt gttccaggtt cggttgtcaa ggcggcgacc atcagctccg gttgggaaaa     300

tggagtctta tcagggaacc agaccttgac agaccaaccg attgtcttcc aaggttcagc     360

tccgattaat tcttggtata ctcaagccta cgattcattc ccgattacag ctgtggaggc     420

cttggagtat tcttctaatg cctatatggt tcaaacggct ttgggcatta tgggtcagac     480

ctatcaaccc aatatgtttg                                                 500


<210>   806
<211>   565
<212>   DNA
<213>   Staphylococcus epidermidis

<400>   806
tagcaataca atcgcacata cattaataga gaaaagaaa aaagatggca aagatattca      60

actaactatt gatgctaaag ttcaaaagag tatttataac aacatgaaaa atgattatgg     120

ctcaggtact gctatccacc ctcaaacagg tgaattatta gcacttgtaa gcacaccttc     180

atatgacgtc tatccatttta tgtatggcat gagtaacgaa gaatataata aattaaccga     240

agataaaaaa gaacctctgc tcaacaagtt ccagattaca acttcaccag gttcaactca     300

aaaaatatta acagcaatga ttgggttaaa taacaaaaca ttagacgata aaacaagtta     360
```

```
taaaatcgat ggtaaaggtt ggcaaaaaga taaatcttgg ggtggttaca acgttacaag    420

atatgaagtg gtaaatggta atatcgactt aaaacaagca atagaatcat cagataacat    480

tttctttgct agagtagcac tcgaattagg cagtaagaaa tttgaaaaag gcatgaaaaa    540

actaggtgtt ggtgaagata tacca                                          565


<210>   807
<211>   524
<212>   DNA
<213>   Streptococcus pneumoniae

<400>   807
tgaagatggc agcaagagct tgctgggaac ttctggaatg gagagttcct tgaacagtat     60

tcttgcaggg acagacggca ttattaccta tgaaaaggat cgtctgggca atattgtacc    120

cggaacagaa ctggtatcgc aacaaactgt ggatggcaag gatgtttata caacattgtc    180

tagtccgcta caatctttca tggaaactca gatggatgcc tttctagaaa aagtaaaagg    240

taagtatatg accgcgacct tggtcagtgc aaagaccggt gaaattctcg ctaccaccca    300

acgacctacc tttaatgcag atactaaaga aggaatcact gaggactttg tttggcgtga    360

tattctttat caaagtaact atgaaccagg atcagccttt aaggtcatga tgttagcttc    420

ttctattgat aataatacct tcccaagtgg agaatacttc aatagcagtg aattcaaaat    480

agcggatgcg acgactcgag attgggatgt taatgagggt ttga                     524


<210>   808
<211>   715
<212>   DNA
<213>   Staphylococcus aureus

<400>   808
agagatgaat gcaggaacag ttttagatcc acaaatgata aaaaatgaag atgtcagtga     60

aaaagagtat gcagcagttt ctcagcaact ttccaaatta ccaggtgtta acacgtctat    120

ggattgggat agaaaatatc catatggcga tactttaaga ggtatattcg agatgtatc     180

gacacctgct gaaggtattc caaaagaatt gacagaacat tacttatcca aggatattc     240

acgcaatgat cgtgttggaa atcttacct agaatatcaa tatgaagatg tattgcgtgg    300

taagaagaaa gaaatgaaat acacaacgga caaatctggt aaagttacat cttcagaagt    360

gttaaatcct ggcgctcgcg gtcaagattt gaaattaacg atcgatatag atcttcaaaa    420

agaagtagaa gcattattag ataaacaaat taagaagctt cgcagtcaag gtgccaaaga    480
```

```
tatggataat gcaatgatgg ttgtacaaaa tcctaaaaat ggagacattc ttgcgcttgc      540

cggaaagcag attaataaga gtggtaaaat gactgattat gacattggta cgtttacttc      600

tcaatttgcg gttggatctt ctgtaaaagg tggaacatta ttagccggtt atcagaataa      660

agctatcaaa gttggagaaa caatggtcga tgaaccatta catttccaag gtggt           715
```

```
<210>   809
<211>   623
<212>   DNA
<213>   Enterococcus faecalis

<400>   809
caaacaagaa ttagccgaag cgaagaaaac agctactaca tttttaaacg tattgtcaaa       60

acaggaattt gataagttac cgtccgttgt tcaagaagct agcttaaaga aaaatggcta      120

tgatactaaa tctgttgttg aaaaatacca agcaatttat tcaggattc aagcagaagg       180

agtcaaagct agtgatgttc aagtcaaaaa ggcgaaagac aatcaataca catttaccta      240

taaattatcg atgagcactc ctttaggcga aatgaaagat ttgtcttatc aatcaagtat      300

cgccaagaaa ggcgatacct accaaatcgc ttggaagccg tctttaattt ttccagatat      360

gtcaggaaat gataaaattt cgattcaagt agataatgcc aaacgtggag aaattgtcga      420

tcgtaatggt agtgggctag caattaacaa agtgtttgac gaagtgggcg tagtgcctgg      480

caaactcggt tctggcgcag aaaaaacagc caatatcaaa gcttttagtg ataagttcgg      540

cgtttctgtt gatgaaatca atcaaaagtt aagccaagga tgggtccaag cagactcctt      600

tgtaccaatc acagttgctt ctg                                             623
```

```
<210>   810
<211>   660
<212>   DNA
<213>   Enterococcus faecium

<400>   810
tacagatgca gacggtgtag agaaaaaagt tctgatcgaa catgaagttc aaaatggcaa       60

agatatcaaa ttgacaatcg atgcgaaggc acaaaaaaca gcttttgaca gtctaggagg      120

aaaagctgga tcaactgttg cgacaacgcc aaaaaccggt gatcttcttg cgcttgctag      180

ctctccaagc tatgatccaa acaaaatgac aaacgggatc tcacaagaag attacaaagc      240

ttatgaagaa aatcctgaac agccattcat cagccgattt gcgacaggtt atgctcctgg      300

atctacgttt aaaatgatta cagcagcaat cggtctcgac aacggcacta tcgatccaaa      360
```

```
tgaagtgttg acgatcaacg ggcttaaatg gcaaaaagac agttcttggg gatcttatca       420

agtaacgcgt gtcagtgatg tatcacaagt agacttaaaa actgctttga tctattccga       480

taatatatat acggcccaag aaacgttgaa aatgggtgag aaaaaatttc gtacaggctt       540

agataaattc atttttggtg aagaccttga tttgccaatt agtatgaatc cagcacaaat       600

ttctaatgaa gatagcttta actcagatat cttgctagct gatactggat atggacaggg       660
```

```
<210>    811
<211>    522
<212>    DNA
<213>    Enterococcus faecalis

<400>    811
gccggtgtat cactaaagga aaaaacagct tctctatatg aaggaagcca agtggtaaaa        60

gctaagcgag gatcaatttt agatcgatat ggtaatccaa ttgcagaaga tgctacttcc       120

tattcgttat atgtcgtatt atcaaaaaaa tatacgggac aaaataatga aaagctatac       180

gcggagaaaa aagacttcga tgatattgct gaaattttag cgaaatatac caaactagac       240

aaaaaaacag cattgaaata cttgaataat gggatccatg aagatgggtc aacacaatat       300

caagtggaat ttggtacggg tggtcaaaac atcaccttgg aaacacgcca aaaaattgaa       360

gcagatttga aaagaaaaa aatttcaggt gtttatttca atgaacatcc agccagatta       420

tatcccaatg gtcagtttgc ttctcacttt attggctata caaaagcagc caatccagat       480

gatgataaag aaggcttagt aggagcaatg ggactagaac ag                          522
```

```
<210>    812
<211>    332
<212>    DNA
<213>    Staphylococcus aureus

<400>    812
taataaaacg tatgaaatat catctgcaga atgggaagtt atgaatatca tttggatgaa        60

aaaatatgca agtgcgaata atataataga agaaatacaa atgcaaaagg actggagtcc       120

aaaaaccatt cgtacactta taacgagatt gtataaaaag ggatttatag atcgtaaaaa       180

agacaataaa atttttttaat attactctct tgtagaagaa agtgatataa aatataaaac       240

atctaaaaac tttatcaata aagtctacaa aggcggtttc aattcacttg tcttaaactt       300

tgtagaaaaa gaagatctat cacaagatga aa                                      332
```

<210>   813
<211>   530
<212>   DNA
<213>   Streptococcus pneumoniae

<400>   813
cttggttagc gattcagtta gaacaaaaag caaccaagca agaaatcttg acctactata   60

taaataaggt ctacatgtct aatggcaact atggaatgca gacagcagct caaaactact   120

atggtaaaga cctcaataat ttaagtttac ctcagttagc cttgctggct ggaatgcctc   180

aggcaccaaa ccaatatgac ccctattcac atccagaagc agcccaagac cgccgaaact   240

tggtcttatc tgaaatgaaa aatcaaggct acatctctgc tgaacagtat gagaaagcag   300

tcaatacacc aattactgat ggactacaaa gtctcaaatc agcaagtaat taccctgctt   360

acatggataa ttacctcaag gaagtcatca atcaagttga agaagaaaca ggatataacc   420

tgctcacaac tgggatggat gtctacacaa atgtagacca agaagctcaa aaacatctgt   480

gggatatttta caatacagac gaatacgttg cctatccaga cgatgaattg   530

<210>   814
<211>   355
<212>   DNA
<213>   Staphylococcus aureus

<400>.   814
agcaagttga aatatctatg gctgaatggg atgttatgaa tataatatgg gataaaaaat   60

cagtatcagc taatgaaatt gtagttgaaa ttcaaaaata taaagaagtt agcgataaaa   120

cgattagaac attaatcaca agactatata aaaagagat tataaaacga tacaaatcag   180

agaatatttta tttttactca tcaaatatta agaagacga tattaaaatg aaaactgcta   240

aaacctttct taataaactg tatggagggg acatgaaaag tttagtgctg aattttgcga   300

aaaatgaaga attaaataac aaagaaattg aagaattgcg agacatttta aatga   355

<210>   815
<211>   702
<212>   DNA
<213>   Escherichia coli

<400>   815
acatcgaact ggatctcaac agcggtaaga tccttgagag ttttcgcccc gaagaacgtt   60

ttccaatgat gagcactttt aaagttctgc tatgtggtgc ggtattatcc cgtgttgacg   120

ccgggcaaga gcaactcggt cgccgcatac actattctca gaatgacttg gttaagtact   180

```
caccagtcac agaaaagcat cttacggatg gcatgacagt aagagaatta tgcagtgctg      240

ccataaccat gagtgataac actgctgcca acttacttct gacaacgatc ggaggaccga      300

aggagctaac cgcttttttg cacaacatgg gggatcatgt aactcgcctt gatcgttggg      360

aaccggagct gaatgaagcc ataccaaacg acgagcgtga caccacgacg cctgcagcaa      420

tggcaacaac gttgcgcaaa ctattaactg gcgaactact tactctagct tcccggcaac      480

aattaataga ctggatggag gcggataaag ttgcaggacc acttctgcgc tcggcccttc      540

cggctggctg gtttattgct gataaatctg gagccggtga gcgtgggtct cgcggtatca      600

ttgcagcact ggggccagat ggtaagccct cccgtatcgt agttatctac acgacgggga      660

gtcaggcaac tatggatgaa cgaaatagac agatcgctga ga                        702
```

```
<210>    816
<211>    596
<212>    DNA
<213>    Klebsiella oxytoca

<400>    816
tgtgcagcac cagtaaagtg atggccgccg ccgcggtatt aaaacagagc gaaagcaata       60

aagaggtggt aaataaaagg ctggagatta acgcagccga tttggtggtc tggagtccga      120

ttaccgaaaa acatctccag agcggaatga cgctggctga gctaagcgcg gcgacgctgc      180

aatatagcga caatacggcg atgaatctga tcatcggcta ccttggcggg ccggaaaaag      240

tcaccgcctt cgcccgcagt atcggcgatg ccacctttcg tctcgatcgt acggagccca      300

cgctgaatac cgccatcccg ggcgatgagc gtgataccag cacgccgctg gcgatggctg      360

aaagcctacg caagctgacg cttggcgatg cgctgggcga acagcaacgc gcccagttag      420

tcacctggct gaaaggcaat accaccggcg ggcaaagcat tcgcgcgggc ctgcctgaaa      480

gctgggtggt cggcgataaa accggcgccg agattacgg caccaccaat gatattgcgg       540

ttatctggcc ggaagatcac gctccgctgg tattagtcac ctactttacc cagccg          596
```

```
<210>    817
<211>    558
<212>    DNA
<213>    Enterococcus faecium

<400>    817
acagtgccag ttcttatcgt ttattgcaag ccgatgaaaa tacaaaaagt ctattattgc       60

gtcaactaat tttcatattt ttgagttgga gcgtgatctt cttagctcgt tcagtcaaac      120
```

```
tacactattt acttcaccct aaaatagcag gatacggttt agccttatcg attttctttt        180

tagtattagt aagaataggg atattcggtg tcactgtcaa cggcgcacaa cgttggatct        240

ctctgtttgg cattcaattc cagccttctg aactggcaaa tctttttttg atttttatt         300

taagctggtt ttttcgtgac ggaaatagta gcccaaaaga tctaaaaaaa ccattcctga        360

ttacagtagg tataactttt ctgattttat ttcagccaaa gattgctgga gcattgatga        420

tcctttcgat tgcgtgggtc atattttggg cagcggcggt tccatttaaa aaagggatct        480

atctaatcgt tactttttct gcattgctga ttggagcagc aggcggggta ttatatttag        540

gaaataaagg ttggcttc                                                      558
```

```
<210>    818
<211>    750
<212>    DNA
<213>    Staphylococcus aureus

<400>    818
ctcacccaaa tggagattta ttacaattaa cgaaatgggc agaaacaaag aaattaactg         60

gatggtacgc gcgaagaatc gctgtaggtc gtgacggtga agttcagggt gttgcgcaat        120

tacttttaa aaaagtacct aaattaccgt atacgctatg ttatatttca cgtggttttg        180

ttgttgatta tagtaataaa gaagcgttaa atgcattgtt agacagtgca aaagaaattg        240

ctaaagctga gaaagcgtat gcaattaaaa tcgatcctga tgttgaagtt gataaaggta        300

cagatgcttt gcaaaatttg aaagcgcttg gttttaaaca taaaggattt aaagaaggtt        360

tatcaaaaga ctacatccaa ccacgtatga ctatgattac accaattgat aaaaatgatg        420

atgagttatt aaatagtttt gaacgccgaa atcgttcaaa agtgcgcttg ctttaaagc         480

gaggtacgac agtagaacga tctgatagag aaggtttaaa aacatttgct gaattaatga        540

aaatcactgg ggaacgcgat ggcttcttaa cgcgtgatat tagttacttt gaaaatattt        600

atgatgcgtt gcatgaagat ggagatgctg aactattttt agtaaagttg gacccaaaag        660

aaaatatagc gaaagtaaat caagaattga atgaacttca tgccgaaata gctaaatggc        720

agcagaagat ggaaacatct gaaaagcaag                                         750
```

```
<210>    819
<211>    363
<212>    DNA
<213>    Proteus vulgaris

<400>    819
```

```
acaacatttc gccaaacagc gacgattgca gtttcattaa tatctctatt ggtatctcca        60

atgctatggg ctaacaccaa taatacgatt gaagagcaat taagtacgct tgaaaaatat       120

agccaaggtc gtttaggtgt tgctttaatc aacacggaag ataattcaca ataacatat        180

cgtggtgaag aacgttttgc gatggcaagt acaagtaagg ttatggctgt tgcggcagtt       240

ttaaaagaga gtgaaaaaca agcgggatta ttagataaga atattacaat taaaaaatcc       300

gacttagttg cttacagccc tattacagaa aaacatttag taacaggaat gtctttagct       360

caa                                                                     363
```

<210> 820
<211> 545
<212> DNA
<213> Staphylococcus haemolyticus

<400> 820
```
aatgatggct ttgaagtagt gttactaggt gtaaaagatg aaagcaataa agtattagct        60

gctagtcttt tctctaaaat accgaccatg ggaagttatg tatattactc aaatcgaggc       120

ccagtaatgg actattctga tttaggctta gttgattttt acttacgcga attagaaaag       180

tatttacatc aacaccaatg tttatacgtt aaaattgatc catactggat ttatcaaatt       240

tatgataaag atattaatcc acttgaagat agagagaaaa atgatgctat agttaatttg       300

tttaaatcac atggatatga acaccatgga tttactactg aatatgacac atcaagtcaa       360

gcaagatgga tgggtgttag ctatctaaaa ggggaaacac ctgcttcatt aagaaaacaa       420

tttgatagcc aacgtaaaag aaatattaat aaagcgataa actatggggt gaaagtaaga       480

ttccttggta gagatgagtt tcatatattc ttagacttat accgtgaaac .agaagcaaga      540

acagg                                                                   545
```

<210> 821
<211> 633
<212> DNA
<213> Pseudomonas aeruginosa

<400> 821
```
ccatcaggca acagaatgat acctaaatca ttagtggccg cagtttttcc ggctttgata        60

cccgaagtac cagttttatg tgcgaccaca gtaccagctg gtaacaaacc ttttaaccgc       120

tctggtcctg tggtggtttc gaccatccac ttccataaca aagcctgcga ggtttcagac       180

agctgtgttt tttgctcaaa cttttttcagg atctctgcag cacctttcat cgaggtccag       240
```

```
ttttgatact gcacctgatc atcggcgtgc atctgcgctt catttgcgac cacagcggtc        300

tcctttatac ccatagactg gatatagtca tgcaaagcag ctggtccacc aaccagttca        360

aataacaaat cacaggccac gttatcgctg tgcgagaccg agtattgcag cagttgctgc        420

actggaacac taaactcgtc tccctgatac gctttcatta tcggagccca ggtattctgt        480

aaaaccttag ccctgtttac gataacggtc tgatttaaat ccaactttcc ctgatcaacc        540

tgatgcagta ccaacatagc taaatgcaat ttaaatacac tttgcattgg gaatttttca        600

aaaggattaa tcagtaaagg ttccagatcg tca                                      633
```

```
<210>    822
<211>    340
<212>    DNA
<213>    Klebsiella oxytoca

<400>    822
cttactatcg gagctggtca ccggtttatc cggcagggac tcatcgccag tattccaacc         60

ccagcatagg cctgtttggt cacctggccg caaatagtct gggccagcca tttgagcaac        120

tgatgagcca gaccctgctg cccaagctgg gtttgcacca cacctatatc caggtgccgg        180

agtcggccat ggcgaactat gcctacggct attcgaagga agataagccc atccgggtca        240

ctccgggcgt gctggcggcc gaggcttacg ggatcaagac cggctcggcg gatctgctga        300

agtttgccga ggcaaacatg gggtatcagg gagatgccct                               340
```

```
<210>    823
<211>    768
<212>    DNA
<213>    Proteus vulgaris

<400>    823
tcactcatta accattgctg aaatatttcc attgatgctg tcattggctt tgattttaaa         60

tatgttagcc aatattttcc catttcaact tctattttaa agggttgcac taactgacca        120

ttttcaattt ctcttgaaaa catttttgct ggtgctaatg caactcctcc ttcataaata        180

gcgctttcaa tcattaagcg tgaagagtca aaaatagagc ccgttatttt tataggcgac        240

atatttgctt tttcaaacca ttgcaaccac tcatcttctc gataagagcg atacaagttt        300

tcatttatta gatcagttgg atgttgtaaa cgtttcgccg tacccgatga acacaatacc        360

gttaatggtg cagaaaataa tgctttgtta tgagttaatg gccataaacc ttcaccaaat        420

cgaatagcaa aatctaatcc ttcagtagcc aaattgacca cattattatt tgttcttaaa        480
```

```
ttcacttcta ttcttggata taactgccta aattcggcca acctaggtaa taaccaccca    540

accgcaaatg taccgacagc tgcaattgaa acaacatcgc gatattcacc gcgttcaaat    600

tgtttaaata cacgctcaat atcactaaaa gccgttgtta atacagaaaa taagatttga    660

gcatcatccg tcatttctaa acctcgaggt aagcgcttaa aaagaataac gccaagccgc    720

tcttctaaca ttctcacttg ttggctaaca gcaccttgag tgacatac               768
```

```
<210>    824
<211>    568
<212>    DNA
<213>    Enterococcus faecium

<400>    824
ttatctgttt tgttactgct tacactagta gtcggctttt tttcgattga atttgtccat     60

ggattttcgt ctgcaaaaca gacctcaacc gtaaaaaagg tagatccgaa aagtgtccct    120

accacactaa atgtggcttt gattggttcg gatgcccggt cgaaagaaga aaatggtcgc    180

tcagattcac ttatggttgc acaatacgac cagaaaacac aacaagcaaa actaatctct    240

atcatgagag actcatatgt cgatatacca ggttacggaa tggataaaat caatgcagcg    300

tactcttacg gaggaattga tttattgaac caaacattaa aggaaaattt caaatttgaa    360

gccccgtatt atgcaagtat cacatttcaa gattttatcg attgcgtcaa tgaactgttt    420

cctgatggag taaagattga tgcagaaaaa tctttagatt tagatggcgt atatataaaa    480

aaagggaagc aagtaatgga tggcaatacg ttactgcagt atgctcgatt ccgtgaagac    540

gaagaagggg actttgggag gattagaa                                    568
```

```
<210>    825
<211>    763
<212>    DNA
<213>    Staphylococcus aureus

<400>    825
tgacttcgga tgagttcaat gcgtttacaa caaagcattt ttcacattac acacaatcag     60

ctattcatta caatcataga gttgatttaa aaggcgatgt gcatcttgta ggggttaaag    120

atgacaatgg tcaagtgatt gcaggatgct tattgacaga agcacgcaca cttaaatttt    180

tcaaatattt ttatacacat cgcgggccag tgatggatta tacaaatcaa tcattagtag    240

catttttctt taaagcatta acgtcatatt taaagaaaca caattgttta tatgtccttg    300

tagatccata tttaattgaa aatttacgca atgcagacgg tgaaattgtt aaatcttatg    360
```

```
ataaccgagc atttgttaga acaatggata aattaggtta taaacaccaa ggtttccctg    420

taggttatga ttcaatgagc caaatccgtt ggctgtcagt gttagattta aaagataaga    480

ctgaagacca acttttaaaa gaaatggatt atcaaacgag acgtaatatt aaaaaaacat    540

atgatattgg tgtcaaaact aaaacgttaa cgattgatga aacgcaaact ttttcgact    600

tattccatat ggctgaggaa aagcacggtt tcaaattccg tgagttacca tactttgaag    660

aaatgcaaaa gttatacgat gaccacgcca tgttaaagtt ggcgtatatt gatttaaacg    720

agtatttaaa aacgttacaa ttaaagcaac aacaattaac agc                      763
```

```
<210>    826
<211>    552
<212>    DNA
<213>    Staphylococcus epidermidis

<400>    826
aagtataatc agttcattgc tcacgatatg tgtaattttt ttagtgagaa tgctctatat     60

aaaatatact caaaatatta tgtcacataa gatttggtta ttagtgctcg tctccacgtt    120

aattccatta ataccatttt acaaaatatc gaattttaca ttttcaaaag atatgatgaa    180

tcgaaatgta tctgacacga cttcttcggt tagtcatatg ttagatggtc aacaatcatc    240

tgttacgaaa gacttagcaa ttaatgttaa tcagtttgag acctcaaata taacgtatat    300

gattctttg atatgggtat ttggtagttt gttgtgctta ttttatatga ttaaggcatt    360

ccgacaaatt gatgttatta aaagttcgtc attggaatcg tcatatctta atgaacgact    420

taaagtatgt caaagtaaga tgcagttcta caaaaagcat ataacaatta gttatagttc    480

aaacattgat aatccgatgg tatttggttt agtgaaatcc caaattgtac taccaactgt    540

cgtagtcgaa ac                                                       552
```

```
<210>    827
<211>    810
<212>    DNA
<213>    Staphylococcus aureus

<400>    827
tgctttagtt ttaagtgcat gtaattcaaa cagttcacat gccaaagagt taaatgattt     60

agaaaaaaaa tataatgctc atattggtgt ttatgcttta gatactaaaa gtggtaagga    120

agtaaaattt aattcagata agagatttgc ctatgcttca acttcaaaag cgataaatag    180

tgctattttg ttagaacaag taccttataa taagttaaat aaaaaagtac atattaacaa    240
```

```
agatgatata gttgcttatt ctcctatttt agaaaaatat gtaggaaaag atatcacttt        300

aaaagcactt attgaggctt caatgacata tagtgataat acagcaaaca ataaaattat        360

aaaagaaatc ggtggaatca aaaaagttaa acaacgtcta aaagaactag gagataaagt        420

aacaaatcca gttagatatg agatagaatt aaattactat tcaccaaaga gcaaaaaaga        480

tacttcaaca cctgctgctt tcggtaagac tttaaataaa cttatcgcaa atggaaaatt        540

aagcaaagaa aacaaaaaat tcttacttga tttaatgtta aataataaaa gcggagatac        600

tttaattaaa gacggtgttc caaaagacta taaggttgct gataaaagtg gtcaagcaat        660

aacatatgct tctagaaatg atgttgcttt tgtttatcct aagggccaat ctgaacctat        720

tgttttagtc atttttacga ataaagacaa taaaagtgat aagccaaatg ataagttgat        780

aagtgaaacc gccaagagtg taatgaagga                                         810
```

```
<210>    828
<211>    565
<212>    DNA
<213>    Plasmid RGN238

<400>    828
tttgaaggaa ctgaaggttg tttttttactt tacgatgcat ccacaaacgc tgaaattgct        60

caattcaata aagcaaagtg tgcaacgcaa atggcaccag attcaacttt caagatcgca       120

ttatcactta tggcatttga tgcggaaata atagatcaga aaaccatatt caaatgggat       180

aaaacccccca aaggaatgga gatctggaac agcaatcata caccaaagac gtggatgcaa       240

ttttctgttg tttgggtttc gcaagaaata acccaaaaaa ttagattaaa taaaatcaag       300

aattatctca aagattttga ttatggaaat caagacttct ctggagataa agaaagaaac       360

aacggattaa cagaagcatg gctcgaaagt agcttaaaaa tttcaccaga agaacaaatt       420

caattcctgc gtaaaattat taatcacaat ctcccagtta aaaactcagc catagaaaac       480

accatagaga acatgtatct acaagatctg gataatagta caaactgta tgggaaaact        540

ggtgcaggat tcacagcaaa tagaa                                             565
```

```
<210>    829
<211>    226
<212>    DNA
<213>    Klebsiella pneumoniae

<400>    829
ggcttacggg atcaagaccg gctcggcgga tctgctgaag tttgccgagg caaacatggg        60
```

```
gtatcaggga gatgccgcgg taaaaagcgc gatcgcgctc acccacaccg gtttctactc      120

ggtgggagac atgacccagg gactgggctg ggagagttac gcctatccgg tgaccgagca      180

gacattgctg gcgggtaacg caccggcggt gagcttccag gccaat                     226


<210>    830
<211>    502
<212>    DNA
<213>    Proteus mirabilis

<400>    830
gcggtaagat ccttgagagt tttcgccccg aagaacgttt tccaatgatg agcactttta       60

aagttctgct atgtggtgcg gtattatccc gtgttgacgc cgggcaagag caactcggtc      120

gccgcataca ctattctcag aatgacttgg ttaagtactc accagtcaca gaaaagcatc      180

ttacggatgg catgacagta agagaattat gcagtgctgc cataaccatg agtgataaca      240

ctgcggccaa cttacttctg acaacgatcg gaggaccgaa ggagctaacc gctttttttgc     300

acaacatggg ggatcatgta acccgccttg atcgttggga accggagctg aatgaagcca      360

taccaaacga cgagcgtgac accacgacgc ctgcagcaat ggcaacaacg ttgcgcaaac      420

tattaactgg cgaactactt actctagctt cccggcaaca attaatagac tggatggagg      480

cggataaagt tgcaggacca ct                                              502


<210>    831
<211>    391
<212>    DNA
<213>    Staphylococcus warneri

<400>    831
agttgaaaat gaaatatgta taagaacttt aatagatgat gattttcctt tgatgttaaa       60

atggttaact gatgaaagag tattagaatt ttatggtggt agagataaaa aatatacatt      120

agaatcatta aaaaaacatt atacagagcc ttgggaagat gaagttttta gagtaattat      180

tgaatataac aatgttccta ttggatatgg acaaatatat aaaatgtatg atgagttata      240

tactgattat cattatccaa aaactgatga gatagtctat ggtatggatc aatttatagg      300

agagccaaat tattggagta aaggaattgg tacaagatat attaaattga tttttgaatt      360

tttgaaaaaa gaaagaaatg ctaatgcagt t                                     391


<210>    832
<211>    380
<212>    DNA
```

```
<213>   Pseudomonas aeruginosa

<400>   832
tcattcgcac atgtaggctc ggccctgacc aagtccaatc catgcgggct gctcttgatc      60

ttttcggtcg tgagttcgga gacgtagcca cctactccca acatcagccg gactccgatt     120

acctcgggaa cttgctccgt agtaggacat tcatcgcgct tgctgccttc gagcaagaag     180

cggttgttgg cgctctcgcg gcttacgttc tgcccaagtt tgagcaggcg cgtagtgaga     240

tctatatcta tgatctcgca gtctccggcg agcaccgccg gcagggcatt gccaccgcgc     300

tcatcaatct cctcaagcat gaggccaacg cgcttggtgc ttacgtgatc tacgtgcaag     360

cggattacgg tgacgatccc                                                 380


<210>   833
<211>   616
<212>   DNA
<213>   Escherichia coli

<400>   833
gaccgatcac cctacgagga gactcgtaat ggcgctcggt tggatgacaa aacccgccgt      60

acctggccgc cgttcgatcc cgcaacggcc gggacttacc gtgggttcgg cctgctgaat     120

cagtttctgg ttcaagcccc cggcgcgcgg cgcagcgcgc accccgatgc atcgatggtc     180

gcggttggtc cactggctga aacgctgacg gagcctcaca agctcggtca cgccttgggg     240

gaagggtcgc ccgtcgagcg gttcgttcgc cttggcggga aggccctgct gttgggtgcg     300

ccgctaaact ccgttaccgc attgcactac gccgaggcgg ttgccgatat ccccaacaaa     360

cggcgggtga cgtatgagat gccgatgctt ggaagcaacg gcgaagtcgc ctggaaaacg     420

gcatcggatt acgattcaaa cggcattctc gattgctttg ctatcgaagg aaagccggat     480

gcggtcgaaa ctatagcaaa tgcttacgtg aagctcggtc gccatcgaga aggtgtcgtg     540

ggctttgctc agtgctacct gttcgacgcg caggacatcg tgacgttcgg cgtcacctat     600

cttgagaagc atttcg                                                     616


<210>   834
<211>   707
<212>   DNA
<213>   Escherichia coli

<400>   834
aagtttcatt gccagacggg acttctgcaa tcgtcaaggg attgaaacct atagaagaca      60

ttgctgatga actgcgcggg gccgactatc tggtatggcg caatgggagg ggagcagtcc     120
```

```
ggttgctcgg tcgtgagaac aatctgatgt tgctcgaata tgccgggggag cgaatgctct    180

ctcacatcgt tgccgagcac ggcgactacc aggcgaccga aattgcagcg gaactaatgg    240

cgaactgtat gcccgcatct gaggacccct gccttctgcc cttctcccga tccgggatcg    300

ctttgcagct ttgtttcagc gggcgcgcga atgatcaaaa cgcaggttgt caaactgact    360

acgtccacgc ggcgattata gccgatcaaa tgatgagcaa tgcctcggaa ctgcgtgggc    420

tacatggcga tctgcatcat gaaaacatca tgttctccag tcgcggctgg ctggtgaaag    480

atcccgtcgg tctggtcggt gaagtgggct ttggcgccgc aaatatgttc tacgatccgg    540

ctgacagaga cgacctttgt ctcgatccta gacgcattgc acagatggcg gacgcattct    600

ctcgtgcgct ggacgtcgat ccgcgtcgcc tgctcgaaca ggcgtacgct tatgggtgcc    660

tttccgcagc ttggaacgcg gatggagaag aggagcaacg cagtcta                  707
```

```
<210>    835
<211>    545
<212>    DNA
<213>    Enterococcus faecalis

<400>    835
gccgaagtat cgactcaact atcagaggta gttggcgtca tcgagcgcca tctcgaaccg     60

acgttgctgg ccgtacattt gtacggctcc gcagtggatg gcggcctgaa gccacacagt    120

gatattgatt tgctggttac ggtgaccgta aggcttgatg aaacaacgcg gcgagctttg    180

atcaacgacc ttttggaaac ttcggcttcc cctggagaga gcgagattct ccgcgctgta    240

gaagtcacca ttgttgtgca cgacgacatc attccgtggc gttatccagc taagcgcgaa    300

ctgcaatttg gagaatggca gcgcaatgac attcttgcag gtatcttcga gccagccacg    360

atcgacattg atctggctat cttgctgaca aaagcaagag aacatagcgt tgccttggta    420

ggtccagcgg cggaggaact ctttgatccg gttcctgaac aggatctatt tgaggcgcta    480

aatgaaacct taacgctatg gaactcgccg cccgactggg ctggcgatga gcgaaatgta    540

gtgct                                                                  545
```

```
<210>    836
<211>    515
<212>    DNA
<213>    Escherichia coli

<400>    836
gcaggtcaca ttgatacaca aaattctagc tgcggcagat gagcgaaatc tgccgctctg     60
```

```
gatcggtggg ggctgggcga tcgatgcacg gctagggcgt gtaacacgca agcacgatga    120

tattgatctg acgtttcccg gcgagaggcg cggcgagctc gaggcaatag ttgaaatgct    180

cggcgggcgc gtcatggagg agttggacta tggattctta gcggagatcg gggatgagtt    240

acttgactgc gaacctgctt ggtgggcaga cgaagcgtat gaaatcgcgg aggctccgca    300

gggctcgtgc ccagaggcgg ctgagggcgt catcgccggg cggccagtcc gttgtaacag    360

ctgggaggcg atcatctggg attactttta ctatgccgat gaagtaccac cagtggactg    420

gcctacaaag cacatagagt cctacaggct cgcatgcacc tcactcgggg cggaaaaggt    480

tgaggtcttg cgtgccgctt tcaggtcgcg atatg                               515


<210>   837
<211>   502
<212>   DNA
<213>   Staphylococcus aureus

<400>   837
gctattggtg tttatggctc tcttggtcgt cagactgatg ggccctattc ggatattgag     60

atgatgtgtg tcatgtcaac agaggaagca gagttcagcc atgaatggac aaccggtgag    120

tggaaggtgg aagtgaattt tgatagcgaa gagattctac tagattatgc atctcaggtg    180

gaatcagatt ggccgcttac acatggtcaa tttttctcta ttttgccgat ttatgattca    240

ggtggatact tagagaaagt gtatcaaact gctaaatcgg tagaagccca aacgttccac    300

gatgcgattt gtgcccttat cgtagaagag ctgtttgaat atgcaggcaa atggcgtaat    360

attcgtgtgc aaggaccgac aacatttcta ccatccttga ctgtacaggt agcaatggca    420

ggtgccatgt tgattggtct gcatcatcgc atctgttata cgacgagcgc ttcggtctta    480

actgaagcag ttaagcaatc ag                                            502


<210>   838
<211>   452
<212>   DNA
<213>   Pseudomonas aeruginosa

<400>   838
gctaaatcga tctcatatcg tcgagtggtg gggcggagaa gaagcacgcc cgacacttgc     60

tgacgtacag gaacagtact tgccaagcgt tttagcgcaa gagtccgtca ctccatacat    120

tgcaatgctg aatggagagc cgattgggta tgcccagtcg tacgttgctc ttggaagcgg    180

ggacggatgg tgggaagaag aaaccgatcc aggagtacgc ggaatagacc agtcactggc    240
```

```
gaatgcatca caactgggca aaggcttggg aaccaagctg gttcgagcac tggttgagtt      300

gctgttcaat gatcccgagg tcaccaagat ccaaacggac ccgtcgccga gcaacttgcg      360

agcgatccga tgctacgaga aagcggggtt tgagaggcaa ggtaccgtaa ccaccccaga      420

tggtccagcc gtgtacatgg ttcaaacacg cc                                    452
```

```
<210>  839
<211>  565
<212>  DNA
<213>  Escherichia coli

<400>  839
ctcatttggc tcaaaggtcg aggtgtggct tgccccgagg tgatcaactg gcaggaggaa       60

caggagggtg catgcttggt gataacggca attccgggag taccggcggc tgatctgtct      120

ggagcggatt tgctcaaagc gtggccgtca atggggcagc aacttggcgc tgttcacagc      180

ctatcggttg atcaatgtcc gtttgagcgc aggctgtcgc gaatgttcgg acgcgccgtt      240

gatgtggtgt cccgcaatgc cgtcaatccc gacttcttac cggacgagga caagagtacg      300

ccgcagctcg atcttttggc tcgtgtcgaa cgagagctac cggtgcggct cgaccaagag      360

cgcaccgata tggttgtttg ccatggtgat ccctgcatgc cgaacttcat ggtggaccct      420

aaaactcttc aatgcacggg tctgatcgac cttgggcggc tcggaacagc agatcgctat      480

gccgatttgg cactcatgat tgctaacgcc gaagagaact gggcagcgcc agatgaagca      540

gagcgcgcct tcgctgtcct attca                                            565
```

```
<210>  840
<211>  707
<212>  DNA
<213>  Staphylococcus aureus

<400>  840
gagaatatca ccggaattga aaaaactgat cgaaaaatac cgctgcgtaa aagatacgga       60

aggaatgtct cctgctaagg tatataagct ggtgggagaa aatgaaaacc tatatttaaa      120

aatgacggac agccggtata aaggaccac ctatgatgtg gaacgggaaa aggacatgat       180

gctatggctg aaggaaagc tgcctgttcc aaaggtcctg cactttgaac ggcatgatgg       240

ctggagcaat ctgctcatga gtgaggccga tggcgtcctt tgctcggaag agtatgaaga      300

tgaacaaagc cctgaaaaga ttatcgagct gtatgcggag tgcatcaggc tctttcactc      360

catcgacata tcggattgtc cctatacgaa tagcttagac agccgcttag ccgaattgga      420
```

```
ttacttactg aataacgatc tggccgatgt ggattgcgaa aactgggaag aagacactcc    480

atttaaagat ccgcgcgagc tgtatgattt tttaaagacg gaaaagcccg aagaggaact    540

tgtctttтcc cacggcgacc tgggagacag caacatcttt gtgaaagatg gcaaagtaag    600

tggctttatt gatcttggga gaagcggcag ggcggacaag tggtatgaca ttgccttctg    660

cgtccggtcg atcagggagg atatcgggga agaacagtat gtcgagc                  707
```

```
<210>    841
<211>    329
<212>    DNA
<213>    Pseudomonas aeruginosa

<400>    841
cctgaccaag tccaatccat gcgggctgct cttgatcttt tcggtcgtga gttcggagac     60

gtagccacct actcccaaca tcagccggac tccgattacc tcgggaactt gctccgtagt    120

aggacattca tcgcgcttgc tgccttcgag caagaagcgg ttgttggcgc tctcgcggct    180

tacgttctgc ccaagtttga gcaggcgcgt agtgagatct atatctatga tctcgcagtc    240

tccggcgagc accgccggca gggcattgcc accgcgctca tcaatctcct caagcatgag    300

gccaacgcgc ttggtgctta cgtgatcta                                      329
```

```
<210>    842
<211>    423
<212>    DNA
<213>    Pseudomonas aeruginosa

<400>    842
tgcgatgctc tatgagtggc taaatcgatc tcatatcgtc gagtggtggg gcggagaaga     60

agcacgcccg acacttgctg acgtacagga acagtacttg ccaagcgttt tagcgcaaga    120

gtccgtcact ccatacattg caatgctgaa tggagagccg attgggtatg cccagtcgta    180

cgttgctctt ggaagcgggg acggatggtg ggaagaagaa accgatccag gagtacgcgg    240

aatagaccag tcactggcga atgcatcaca actgggcaaa ggcttgggaa ccaagctggt    300

tcgagcactg gttgagttgc tgttcaatga tcccgaggtc accaagatcc aaacggaccc    360

gtcgccgagc aacttgcgag cgatccgatg ctacgagaaa gcggggtttg agaggcaagg    420

tac                                                                  423
```

```
<210>    843
<211>    613
```

```
<212>   DNA
<213>   Staphylococcus aureus

<400>   843
agatttgcca gaacatgaat tacacgaggg caaaaaagaa gattgttatt taatggaata      60

tagatatgat gataatgcca caaatgttaa ggcaatgaaa tatttaattg agcattactt     120

tgataatttc aaagtagata gtattgaaat aatcggtagt ggttatgata gtgtggcata     180

tttagttaat aatgaataca ttttttaaaac aaaatttagt actaataaga aaaaaggtta    240

tgcaaaagaa aaagcaatat ataatttttt aaatacaaat ttagaaacta atgtaaaaat     300

tcctaatatt gaatattcgt atattagtga tgaattatct atactaggtt ataaagaaat     360

taaaggaact tttttaacac cagaaattta ttctactatg tcagaagaag aacaaaattt     420

gttaaaacga gatattgcca gttttttaag acaaatgcac ggtttagatt atacagatat     480

tagtgaatgt actattgata ataaacaaaa tgtattagaa gagtatatat tgttgcgtga     540

aactatttat aatgatttaa ctgatataga aaaagattat atagaaagtt ttatggaaag     600

actaaatgca aca                                                        613


<210>   844
<211>   424
<212>   DNA
<213>   Staphylococcus aureus

<400>   844
atatcaggaa agattggaaa tacggattct gttagaccac ttgaagttac ggttataaat      60

aggagtgaag ttgtcccttg gcaatatcct ccaaaaagag aatttatata cggtgagtgg     120

ctcagggggtg aatttgagaa tggacaaatt caggaaccaa gctatgatcc tgatttggct    180

attgttttag cacaagcaag aaagaatagt atttctctat ttggtcctga ttcttcaagt     240

atacttgtct ccgtaccttt gacagatatt cgaagagcaa ttaaggattc tttgccagaa     300

ctaattgagg ggataaaagg tgatgagcgt aatgtaattt taaccctagc tcgaatgtgg     360

caaacagtga ctactggtga aattacctcg aaagatgtcg ctgcagaatg ggctatacct     420

cttt                                                                  424


<210>   845
<211>   532
<212>   DNA
<213>   synthetic construct

<400>   845
```

```
aagatacgga aggaatgtct cctgctaagg tatataagct ggtgggagaa aatgaaaacc      60

tatatttaaa aatgacggac agccggtata aagggaccac ctatgatgtg gaacgggaaa     120

aggacatgat gctatggctg gaaggaaagc tgcctgttcc aaaggtcctg cactttgaac     180

ggcatgatgg ctggagcaat ctgctcatga gtgaggccga tggcgtcctt tgctcggaag     240

agtatgaaga tgaacaaagc cctgaaaaga ttatcgagct gtatgcggag tgcatcaggc     300

tctttcactc catcgacata tcggattgtc cctatacgaa tagcttagac agccgcttag     360

ccgaattgga ttacttactg aataacgatc tggccgatgt ggattgcgaa aactgggaag     420

aagacactcc atttaaagat ccgcgcgagc tgtatgattt tttaaagacg gaaaagcccg     480

aagaggaact tgtcttttcc cacggcgacc tgggagacag caacatcttt gt             532
```

```
<210>    846
<211>    200
<212>    DNA
<213>    Staphylococcus aureus

<400>    846
acacagtcaa aactttatta cttcaaaaca taatatagat aaaataatga caaatataag      60

attaaatgaa catgataata tctttgaaat cggctcagga aaagggcatt ttacccttga     120

attagtacag aggtgtaatt tcgtaactgc cattgaaata gaccataaat tatgcaaaac     180

tacagaaaat aaacttgttg                                                 200
```

```
<210>    847
<211>    510
<212>    DNA
<213>    Enterococcus faecium

<400>    847
cgtttaccaa aggagaaggt gaccaatact ctgatataga gttctatata tttttgaaac      60

atagtataac ctcgaacttt gattcatcca actggttgtt tgacgtagct ccgtacttga     120

tgctttataa aaatgagtac ggaacagagg tagttatttt tgataatctt atacgtgggg     180

aatttcattt cctttctgaa aaagatatga acataatccc ctcgtttaaa gattcaggtt     240

atattcctga tacgaaggct atgcttattt acgatgaaac agggcaatta gaaaattatt     300

tatcagagat aagtggtgca agaccaaata gacttactga agaaaatgct aatttttttgt     360

tgtgtaattt ctctaatcta tggttgatgg gaatcaacgt tctaaaaaga ggagaatatg     420

ctcgttcatt agaactctta tcacaacttc aaaaaaatac actacaactt atacgtatgg     480
```

```
cagaaaaaaa tgctgataat tggctaaaca                                          510


<210>    848
<211>    227
<212>    DNA
<213>    Staphylococcus aureus

<400>    848
gtgattacag aaatgaaagc agggcacctg aaagatatcg ataaacccag cgaaccattt          60

gaggtgatag gtaagattat accgaggtat gaaaacgaga attggacctt tacagaatta         120

ctctatgaag cgccatattt aaaaagctac caagacgaag aggatgaaga ggatgaggag         180

gcagattgcc ttgaatatat tgacaatact gataaggtaa tatatct                       227


<210>    849
<211>    708
<212>    DNA
<213>    Staphylococcus aureus

<400>    849
gacagatttt cgatccctta atattgaaaa tctttatgct tatcaatttg aaaaaatagc          60

acttattgga ggtaatggta ctggcaaaac cacattactg aatatgattg ctcaaaaaac         120

aaaaccagaa tctggaacgg ttgaaacgga tggcgaaatt caatattttg aacagcttaa         180

catggatgtg gaaaatgatt ttaacacgtt agacggtagt ttaatgagtg aactccatat         240

acctatgcat acaaccgaca gtatgagtgg tggtgaaaaa gcaaaatata aattagctaa         300

tgtcatatca aattatagtc cgatattact tttagatgaa cctacaaatc acttggataa         360

aattggtaaa gattatctga ataatatttt aaaatattac tatggtactt taattatagt         420

aagtcatgat agagcactta tagaccaaat tgctgacaca atttgggata tacaagaaga         480

tggcacaata agagtgtttta aaggtaatta cacacagtat caaaatcaat atgaacaaga         540

acagttagaa caacaacgtc aatatgaaca gtatataagt gaaaaacaaa gattgtccca         600

agccagtaaa gctaaacgaa atcaagcgca caaatggca caagcatcat caaaacaaaa         660

aaataaaagt atagcaccag atcgtttaag tgcatcaaaa caaaaagg                      708


<210>    850
<211>    259
<212>    DNA
<213>    Staphylococcus aureus

<400>    850
gatataggat acaaaataga agttgattgg atgccttcac gtatggaact taaacataaa          60
```

```
gaatatggat atttagatat tcatcccata aatctaaatg atgatggttc aattactcaa      120

gcaaaccccg aaggtggcaa ttacgttttt caaaatgaat ggttctcaga aactaattat      180

aaaggccgaa aaataccatg tatttcaaaa gaagctcaac ttcttttttca ttctggttat      240

gacttaacag aaaaagacc                                                    259
```

```
<210>    851
<211>    544
<212>    DNA
<213>    Staphylococcus aureus

<400>    851
catttaacga cgaaactggc taaaataagt aaacaggtaa cgtctattga attagacagt       60

catctattca acttatcgtc agaaaaatta aaactgaaca ttcgtgtcac tttaattcac      120

caagatattc tacagtttca attccctaac aaacagaggt ataaaattgt tgggaatatt      180

ccttaccatt taagcacaca aattattaaa aaagtggttt ttgaaagcca tgcgtctgac      240

atctatctga ttgttgaaga aggattctac aagcgtacct tggatattca ccgaacacta      300

gggttgctct tgcacactca agtctcgatt cagcaattgc ttaagctgcc agcggaatgc      360

tttcatccta aaccaaaagt aaacagtgtc ttaataaaac ttacccgcca taccacagat      420

gttccagata aatattggaa gctatatacg tactttgttt caaaatgggt caatcgagaa      480

tatcgtcaac tgtttactaa aaatcagttt catcaagcaa tgaaacacgc caaagtaaac      540

aatt                                                                    544
```

```
<210>    852
<211>    614
<212>    DNA
<213>    Staphylococcus aureus

<400>    852
ccagaaaaac cctaaagaca cgcaaaattt tattacttct aaaaagcatg taaaagaaat       60

attgaatcac acgaatatca gtaaacaaga caacgtaata gaaatcggat caggaaaagg      120

acattttacc aaagagctag tcaaatgagt cgatcagtt actgctatag aaattgatgg      180

aggcttatgt caagtgacta agaagcggt aaacccctct gagaatataa aagtgattca      240

aacggatatt ctaaaatttt ccttcccaaa acatataaac tataagatat atggtaatat      300

tccttataac atcagtacgg atattgtcaa aagaattacc tttgaaagtc aggctaaata      360

tagctatctt atcgttgaga agggatttgc gaaaagattg caaaatctgc aacgagcttt      420
```

```
gggtttacta ttaatggtgg agatggatat aaaaatgctc aaaaaagtac caccactata      480

ttttcatcct aagccaagtg tagactctgt attgattgtt cttgaacgac atcaaccatt      540

gatttcaaag aaggactaca aaaagtatcg atcttttgtt tataagtggg taaaccgtga      600

atatcgtgtt cttt                                                        614
```

```
<210>   853
<211>   525
<212>   DNA
<213>   Enterococcus faecium

<400>   853
gtccgaatcc tatgaaaatg tatcctatag aaggaaacaa atcagtacaa tttatcaaac       60

ctattttaga aaaattagaa aatgttgagg ttggagaata ctcatattat gattctaaga      120

atggagaaac ttttgataag caaattttat atcattatcc aatcttaaac gataagttaa      180

aaataggtaa attttgctca ataggaccag gtgtaactat tattatgaat ggagcaaatc      240

atagaatgga tggctcaaca tatccatttta atttatttgg taatggatgg gagaaacata      300

tgccaaaatt agatcaacta cctattaagg gggatacaat aataggtaat gatgtatgga      360

taggaaaaga tgttgtaatt atgccaggag taaaaatcgg ggatggtgca atagtagctg      420

ctaattctgt tgttgtaaaa gatatagcgc catacatgtt agctggagga aatcctgcta      480

acgaaataaa acaaagattt gatcaagata caataaatca gctgc                      525
```

```
<210>   854
<211>   467
<212>   DNA
<213>   Staphylococcus aureus

<400>   854
cattagcagg aggatgtttc tggtgcatgg ttaaaccatt tacatcatat ccaggcatca       60

agtcagtcgt atctggttat agtggcggtc atgttgacaa cccaacttat gaacaggtat      120

gtacgaatca aaccggccat gtcgaagcag tacaaattac gtttgatcca gaggttactt      180

cctttgaaaa tatattagac atatatttca aacatttga cccaactgat gatcaagggc        240

aatttttcga tagaggcgaa agctatcaac cagtcatttt ctatcatgat gaacatcaga      300

aaaaggctgc tgagtttaaa aagcaacaat taaatgaaca aggtattttc aagaaaccag      360

tgattacacc tattaaacca tataaaaatt tctatccagc tgaagactac catcaagatt      420

attacaaaaa gaacccggta cattattacc aatatcaacg tggttca                    467
```

```
<210>   855
<211>   451
<212>   DNA
<213>   Staphylococcus aureus

<400>   855
gcatataaat atcaaaacca tacaagaaat aaaaaatgac tttcaaagaa gaatgaataa      60

agttaaagaa acttatggtg tatcagatga attatggaac agatggaaac aatggttaga     120

aaacgacgaa ctatggcctc gacatgcgac catgatacat ggggacttac atccaggaca     180

tataatggta gataaccaag caaacgtcac aggtctcata gactggactg aagcaaccca     240

ctccgaccca tcaatggact ttatgggaca ccatcgtgta ttcgacgacg aaggattaga     300

gcaactcata acagcatatg gtaaagctgg aggtgaaata tggccacgaa tgaaagagca     360

tataatagaa ctcaatgcag tattcccaat gtttatcgct gagtttgcta tggaatcagg     420

agaatcggcg tatgaaacga tggcattgaa a                                    451


<210>   856
<211>   505
<212>   DNA
<213>   Streptococcus pyogenes

<400>   856
ggtcttgtct atggcttcac tattaggttt tttaccctat gcggtctttg gacctgcaat      60

tggtgtgcta gtggatcgtc atgataggaa gaagataatg attggtgctg atttaattat     120

cgcagcagct ggttcggtgc ttactattgt tgcattctat atggagctac ctgtctggat     180

ggttatgata gtattgtttta tccgtagcat tggaacagct tttcacaccc cggctctcaa     240

tgcggttacg ccacttttag taccagaaga acagcttacg aaatgtgcag gctatagtca     300

gtctttgcag tctataagct atattgttag tccggcggtt gcagcactct tatactccgt     360

ttgggaacta aatgctatta ttgccatcga tgtattgggt gctgtgattg catctattac     420

ggtagcaatt gtacgtattc ctaagctggg tgatcgcgtg caaagtttgg acccaaattt     480

cataagagaa atgcaagaag gaatg                                          505


<210>   857
<211>   540
<212>   DNA
<213>   Escherichia coli

<400>   857
```

```
gttgagaatg ggagagactg agccggtcag cagtcccacg agcgcgccca acaacatcag    60

caccggcacg cctggcaact gtgaaagcag aagcgagccc accgcagagc cacaaaatgc    120

caccgccagc cagttctgcg ctgatatccg ggcgccgacc gacgcatgaa tggcaatgcc    180

aaggagacca ccagccccca tcattgagga gaacagcccg agctctgcta cttggcgtcc    240

tgcatctaca aacagcgcag gcatgatgac gctgccgttg cgccaacga tgcccacgaa    300

gatcatcact ataccaaaga gagggcgcag caggggttcg ctccagagaa aagcgacgcc    360

ggcgcgcatg gagagagtcg ccgtcgtggt catcgtccga gcggcacgcg cgggaagcac    420

ccacgcgccg agcagacctg caaggacgga gcagaacgcc gtcagcccga gcgttggcgc    480

agcgccaagc aggccgattg cggccccccc aagggccggg ccacctagaa tcgcgacgtt    540
```

<210> 858
<211> 500
<212> DNA
<213> Streptococcus pneumoniae

<400> 858
```
actaagaaaa tcgtagctat ttgggcccag gatgaagagg gtgtgattgg gaaagacaat    60

cgtctacctt ggcatttacc agcagaactg caacacttca agaaacaac tctgaatcat    120

gctatcttga tggggcgggt aacctttgat ggaatagggc gtcgcttgct tccacaacgg    180

gagactttga ttttgacacg taacctagaa gaaacgatag atggggttgc tacttttcat    240

gatgtccagt ctgtcttgga ctggtatcag gctcaagaaa agaatctcta tattcttggt    300

ggaaagcaga tttttcaggc ttttgaaccc tatcttgacg aagtgattgt gactcacatt    360

catgctcggg tggagggaga tacctatttc cctgaagagt ttgatttgtc tcttttttgag    420

acagtttcaa gtaaatttta cgccaaagat gagaagaatc cttatgattt taccatccaa    480

tatcgcaaga gaaaggaagt                                                 500
```

<210> 859
<211> 423
<212> DNA
<213> Staphylococcus aureus

<400> 859
```
caattacctt ggcacttacc aaatgattta aagcatatta aacaactgac cactgggaat    60

acacttgtaa tggcacggaa aactttttaat tctataggga agccattgcc aaatagacgt    120

aacgtcgtac tcactaacca agcttcattt caccatgaag gggtagatgt tataaactct    180
```

```
cttgatgaaa ttaaagagtt atctggtcat gttttttatat ttggaggaca aacgttatac      240

gaagcaatga ttgaccaggt agatgatatg tatatcacag taatagatgg aaagtttcaa      300

ggagacacat tctttccacc atacacattc gaaaactggg aagtcgaatc ttcagtagaa      360

ggtcaactag atgaaaaaaa tactataccg catacattct tacatttagt gcgtagaaaa      420

ggg                                                                    423
```

```
<210>   860
<211>   506
<212>   DNA
<213>   Escherichia coli

<400>   860
tggaatgggt agcttcttcg tcttttttctc cattgcgccc ggactaatga tgggcaggca       60

aggtgtgtct cagcttggct tcagcctgct gttcgccaca gtggcaattg ccatggtgtt      120

tacggctcgt tttatggggc gtgtgatacc caagtggggc agcccaagtg tcttgcgaat      180

gggaatggga tgcctgatag ctggagcagt attgcttgcc atcaccgaaa tatgggcttc      240

gcagtccgtg ttaggcttta ttgctccaat gtggctagtg ggtattggtg tcgccacagc      300

ggtatctgtg tcgcccaatg cgctcttcg aggattcgac catgttgctg aacggtcac      360

ggcagtctac ttctgcttgg gcggtgtact gctaggaagc atcggaacgt tgatcatttc      420

gctgttgccg cgcaacacgg cttggccggt tgtcgtgtac tgtttgaccc ttgcaacagt      480

cgtgctcggt ctgtcttgtg tttccc                                           506
```

```
<210>   861
<211>   530
<212>   DNA
<213>   Enterococcus faecium

<400>   861
gataaccatc acaaacagaa tgatgtacct gtaaagatag cggtaaatat attgaattac       60

ctttattaat gaattttcct gctgtaataa tgggtagaag gtaattacta ttattattga      120

tatttaagtt aaacccagta aatgaagtcc atggaataat agaaagagaa aaagcatttt      180

caggtatagg tgttttggga aacaatttcc ccgaaccatt atatttctct acatcagaaa      240

ggtataaatc ataaaactct ttgaagtcat tctttacagg agtccaaata ccagagaatg      300

ttttagatac accatcaaaa attgtataaa gtggctctaa cttatcccaa taacctaact      360

ctccgtcgct attgtaacca gttctaaaag ctgtatttga gtttatcacc cttgtcacta      420
```

```
agaaaataaa tgcagggtaa aatttatatc cttcttgttt tatgtttcgg tataaaacac      480

taatatcaat ttctgtggtt atactaaaag tcgtttgttg gttcaaataa                 530
```

```
<210>   862
<211>   535
<212>   DNA
<213>   Staphylococcus aureus

<400>   862
agaaaattgg gatagaaaag aatattttga acactatttt aaccagcaaa ctacgtatag       60

cattactaaa gaaattgata ttactttgtt taaagatatg agtaaaaaga aaggatatga      120

aatttatcct tctttgattt atgcaattat ggaagttgta aataaaaata aagtgtttag      180

aacaggaatt aatagtgaga ataaattagg ttattgggat aagttaaatc ctttgtatac      240

agtttttaat aagcaaactg aaaaatttac taacatttgg actgaatctg ataacaactt      300

cacttctttt tataataatt ataaaaatga cttgcttgaa tataaagata aagaagaaat      360

gtttcctaaa aaaccgatac ctgaaaacac cctaccgatt tcaatgattc cttggattga      420

ttttagttca tttaatttaa acattggtaa caatagcaac tttttattgc ctattattac      480

gataggtaaa ttttatagtg agaataataa aatttatata ccagttgcct tgcag          535
```

```
<210>   863
<211>   632
<212>   DNA
<213>   Proteus mirabilis

<400>   863
ttagcactct atgcgacgat gcaggtgatc ttcgcaccta ttttaggaaa attatcagat       60

aaatatggca gaaaacctat tttattaatt tcgctattgg gtgccgcatt agattaccta      120

ttaatggctt gccccacctc attatggatg ctctacattg gacgaataat tgcgggtata      180

acaggagcca ctggtgcagt atgcgcatca gcaatgactg atgtaactca tcctcatgaa      240

agaacacgct atttcggttt tttgggtggt gcatttggtg tgggtttaat tattggcccc      300

atgttagggg gattactcgg tgagatcagc gcccatacgc catttatctt tgcggctatt      360

tctcattcgt tattatttat attttcatta ctttgtttcc aagaaactca aaccacaaaa      420

atttcgactg aaatatccgc attaaatcag gatacagcgc ctcactctac cactggtttt      480

attaaaaaga gtctcttttt ttggcttatt gcctatttta ttattcaact aatagggcaa      540

attccggcca ctatttgggt gctattcaca caagttcgtt tcgcttggca cactactgaa      600
```

```
gtaggtttat ctcttgcatt tcttggtgta tt                                632
```

```
<210>  864
<211>  656
<212>  DNA
<213>  Enterococcus faecalis

<400>  864
cacctgcgag tacaaactgg gtgaacacag cctttatgtt aacctttcc attggaacag      60

ctgtatatgg aaagctatct gatcaattag gcatcaaaag gttactccta tttggaatta     120

taataaattg tttcgggtcg gtaattgggt ttgttggcca ttctttcttt tccttactta     180

ttatggctcg tttttattcaa ggggctggtg cagctgcatt tccagcactc gtaatggttg     240

tagttgcgcg ctatattcca aaggaaaata ggggtaaagc atttggtctt attggatcga     300

tagtagccat gggagaagga gtcggtccag cgattggtgg aatgatagcc cattatattc     360

attggtccta tcttctactc attcctatga taacaattat cactgttccg tttcttatga     420

aattattaaa gaaagaagta aggataaaag gtcattttga tatcaaagga attatactaa     480

tgtctgtagg cattgtattt tttatgttgt ttacaacatc atatagcatt tctttttctta     540

tcgttagcgt gctgtcattc ctgatatttg taaaacatat caggaaagta acagatcctt     600

ttgttgatcc cggattaggg aaaaatatac cttttatgat tggagttctt tgtggg        656
```

```
<210>  865
<211>  554
<212>  DNA
<213>  Enterococcus faecalis

<400>  865
gacaaaggta caacgaggac ggataatacg cttttagaac gtcagagagg aattacaatt      60

cagacaggaa taacctcttt tcagtgggaa aatacgaagg tgaacatcat agacacgcca     120

ggacatatgg atttcttagc agaagtatat cgttcattat cagttttaga tggggcaatt     180

ctactgattt ctgcaaaaga tggcgtacaa gcacgaactc gtatattatt tcatgcactt     240

aggaaaatgg ggattcccac aatctttttt atcaataaga ttgaccaaaa tggaattgat     300

ttatcaacgg tttatcagga tattaaagag aaactttctg ccgaaattgt aatcaaacag     360

aaggtagaac tgtatcctaa tgtgtgtgtg acgaacttta ccgaatctga acaatgggat     420

acggtaatag agggaaacga tgacctttta gagaaatata tgtccggtaa atcattagaa     480

gcattggaac tcgaacaaga ggaaagcata agatttcaga attgttctct gttccctctt     540
```

```
tatcatggaa gtgc                                                  554


<210>   866
<211>   404
<212>   DNA
<213>   Enterococcus faecium

<400>   866
tcttatggca gtacgcaacg taaaatcgat tgtgcgctct gtggaaaaac atgatttcag    60

gttggacagc gaccgtggca aggtactcag cgacatgaca gttggtgtgg tgggaacggg   120

ccagataggc aaagcggtta ttgagcggct gcgaggattt ggatgtaaag tgttggctta   180

tagtcgcagc cgaagtatag aggtaaacta tgtaccgttt gatgagttgc tgcaaaatag   240

cgatatcgtt acgcttcatg tgccgctcaa tacggatacg cactatatta tcagccacga   300

acaaatacag agaatgaagc aaggagcatt tcttatcaat actgggcgcg gtccacttgt   360

agatacctat gagttggtta aagcattaga aaacgggaaa ctgg                    404


<210>   867
<211>   250
<212>   DNA
<213>   Enterococcus faecium

<400>   867
gtgcggtatt gggaaacagt gccgcgttag ttgttggcga ggtggaccaa atcaggctgc    60

agtacggaat ctttcgtatt catcaggaag tcgagccgga aaaaggctct gaaaacgcag   120

ttataaccgt tcccgcagac ctttcagcag aggagcgagg acggatacag gaaacggcaa   180

aaaaaatata taaagcgctc ggctgtagag gtctagcccg tgtggatatg ttttttacaag   240

ataacggccg                                                         250


<210>   868
<211>   663
<212>   DNA
<213>   Enterococcus faecium

<400>   868
aagtgtgggc attactgttt ttggatgcga acaggatgag gcaaatgctt tccgcgcttt    60

atcgccggat tttcatatta tccctacgct gattagcgat gcgatatcgg cagacaacgc   120

aaaattggcc gctggcaatc aatgcgttag cgtaggccat aagtccgagg tttccgaggc   180

gacaattctt gcgctgagaa aggtcggggt aaaatacatt tctacccgca gcatcggctg   240

cgatcacatt gatacgactg ccgccgagag aatgggaatc tcggttggca cggttgcgta   300
```

```
ttcgccggac agcgttgcgg attatgcttt gatgctgatg ctgatggcca tacggggtgc      360

aaaacccacc atgcacgccg tggcgcaaca agatttcaga ttggatcgta tccggggggaa     420

agaactgggg gatatgactg tgggagttat tggaaccggc catatcgggc aagcggtcgt      480

caaaaggctg cggggatttg gatgccatgt gctggcctat gataacagcc gaaaaatgga      540

tgcagattat gtccagcttg atgagcttct aaaaaacagc gatattgtta cgctccatgt      600

gccgctttgt gcggataccc gccatctgat cggtcagaag caaattggag agatgaagca      660

agg                                                                    663


<210>    869
<211>    572
<212>    DNA
<213>    Enterococcus faecium

<400>    869
acgagaatta tacggttttc aaatactata ccgccaaaga agcattggaa tgtatagaca       60

agtctgagat tgaccttgcc atattggaca tcatgcttcc cggcacaagc ggccttacta      120

tctgtcaaaa ataagggac aagcacacct atccgattat catgctgacc gggaaagata      180

cagaggtaga taaaattaca gggttaacaa tcggcgcgga tgattatata acgaagccct      240

ttcgcccact ggagttaatt gctcgggtaa aggcccagtt gcgccgatac aaaaaaattca      300

gtggagtaaa ggagcagaac gaaaatgtta tcgtccactc cggccttgtc attaatgtta      360

acacccatga gtgttatctg aacgagaagc agttatccct tactcccacc gagttttcaa      420

tactgcgaat cctctgtgaa acaaggggga atgtggttag ctccgagctg ctatttcatg      480

agatatgggg cgacgaatat ttcagcaaga gcaacaacac catcaccgtg catatccggc      540

atttgcgcga aaaatgaac gacaccattg at                                     572


<210>    870
<211>    280
<212>    DNA
<213>    Enterococcus faecium

<400>    870
gaattctact tgtcgaggat gatgatcata tctgtaatac agtaagggcg tttctggctg       60

aggcaggata tcaggtggat gcctgcacag atggaaatga ggcatacacc aagtttttacg      120

aaaacactta tcaactggtt attcttgata ttatgctgcc cggtatgaac gggcatgaac      180

ttttgcgtga atttcgtgcg aaaaatgata ctcccattct gatgatgaca gccctgtcgg      240
```

```
atgacgaaaa ccaaatccgg gcgtttgatg cagaggcaga                        280
```

<210> 871
<211> 564
<212> DNA
<213> Enterococcus faecium

<400> 871
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aatgatccga gggaaacttg gggattggat cttaagtatt ttggaaaaca aatatgactt    60

aaatcacctg gacgcgatga aattatatca atattccata cggaacaata tagatatctt   120

tatttatgtg gcgattgtca ttagtattct tattctatgt cgcgtcatgc tttcaaaatt   180

cgcaaaatac tttgacgaga taaataccgg cattgatgta cttattcaga acgaagataa   240

acaaattgag ctttctgcgg aaatggatgt tatggaacaa aagctcaaca cattaaaacg   300

gactctggaa aagcgagagc aggatgcaaa gctggccgaa caaagaaaaa atgacgttgt   360

tatgtacttg gcgcacgata ttaaaacgcc ccttacatcc attatcggtt atttgagcct   420

gcttgacgag gctccagaca tgccggtaga tcaaaaggca aagtatgtgc atatcacgtt   480

ggacaaagcg tatcgactcg aacagctaat cgacgagttt tttgagatta cacggtataa   540

cctacaaacg ataacgctaa caaa                                          564
```

<210> 872
<211> 595
<212> DNA
<213> Enterococcus faecium

<400> 872
```
acatgagttg gaggaaacac agcgatattt ctttgcggca gcttctcatg agctaaaaac    60

gcccatcgcg gctacaagcg ttctgttgga gggaatgctt gaaaatatcg gtgactacaa   120

agatcattct aagtatctgc gcgaatgcat caaaatgatg dataggcagg gcaaaatcat   180

ttccgaaata ctggagcttg tcagcctgaa tgatgggaga atcgtaccca tagctgaacc   240

gttggacata gggcgcacgg ttgccgagtt gctgcccgat tttcaaacct ggcagaggc    300

aaacaaccag cggttcgtca cagatattcc agccgggcaa attgtcctgt ccgatccgag   360

gctgctccaa aaggcactat ccaatgtcat attgaatgca gttcagaaca cgccgcaggg   420

aggcgaggta cggatatgga gtgagcctgg tgctgaaaaa tgccgccttt ttgttttgaa   480

catgggcgtt cacattgatg atactgcgct tccaaggctg ttcaccccat tctatcgcat   540

tgatcaggcg cgaagcagaa aaagtgggcg aagcggttta ggacttgcca tcgta        595
```

```
<210>   873
<211>   598
<212>   DNA
<213>   Enterococcus faecium

<400>   873
ggcagcaaag accttaaacg gcttattgat aagaccgggg gaaacctttt ctttctggtg      60

gctggtacgc catgcggaca aagataccCC ctataaagac ggCCttacgg tgaccaatgg     120

taaactcacc accatgtcgg gCggCggtat gtgccagatg agcaatttac tattttggat     180

gttcctgcat acgccattga caattatcca gCgCagaggt cacgaagtaa aggagtttcc     240

agagccaaac agtgacgaga ttaaaggggt ggatgcaacc atttcagagg gCtggattga     300

tttaaaagtg cgaacgata ccgactgcac ctaccaaata tgggtgacct tagatgatga     360

gaaaatcatc ggtcaggtgt ccgccgacaa agagccccaa gcattataca aaattacaaa     420

tggcagtatc cagtatgtcc gtgaaagtgg cgggatttat gaatatgccc aggttaaacg     480

gatgcaagtt gccttaggta ccggggaaat aatagattgc aagctgcttt atacaaacaa     540

atgcaaaatc tgttatcccc tcccggaaag tgtggatatt caggaggaga accaatga     598


<210>   874
<211>   673
<212>   DNA
<213>   Enterococcus faecalis

<400>   874
gaagatggaa caattcaagg attcatggaa accattaata tgccttatgt aggcgcgggt      60

gtcttagcta gcgttaacgc aatggacaaa atcatgacga aatatctttt acaaactgtt     120

ggcattccac aagtaccatt cgtgccagtt ttaagaagtg actggaaagg aaatccaaaa     180

gaagtctttg aaaaatgtga aggttcttta atttatccgg tctttgttaa acctgccaat     240

atgggttcta gtgtcggaat tagcaaagtg gaaaatcgtg aagaattgca agaagcattg     300

gaagaagctt tccgttatga tgcccgagca attgttgaac aagggatcga agcacgtgaa     360

attgaagtag ccattttagg aaatgaagat gtccgtacga ctttacctgg tgaagtggtg     420

aaagatgtcg ctttctatga ttatgatgca aaatacatca ataacacgat tgaaatgcaa     480

atcccagcgc atgttccaga agaagtagct catcaagcgc aagaatacgc taaaaaagcg     540

tatattatgt tagatggaag tggcttaagt cgctgtgatt tcttcttaac aagcaaaaac     600

gaattattcc tgaatgaatt gaacaccatg cctggtttta ctgactttag tatgtatcct     660
```

ttactgtggg aaa   673

<210>   875
<211>   360
<212>   DNA
<213>   Staphylococcus aureus

<400>   875
tacagtctat ccgggcattg ccagtcgggg atattaaaaa gagtataggt ttttattgcg   60

ataaactagg tttcactttg gttcaccatg aagatggatt cgcagttcta atgtgtaatg   120

aggttcggat tcatctatgg gaggcaagtg atgaaggctg gcgctctcgt agtaatgatt   180

caccggtttg tacaggtgcg gagtcgttta ttgctggtac tgctagttgc cgcattgaag   240

tagagggaat tgatgaatta tatcaacata ttaagccttt gggcattttg caccccaata   300

catcattaaa agatcagtgg tgggatgaac gagactttgc agtaattgat cccgacaaca   360

<210>   876
<211>   508
<212>   DNA
<213>   Enterococcus faecium

<400>   876
tgggataact tcacaggaaa accggtggat gggtatgagg tgaatcgcat catcggcaca   60

aaggccgtgg cgtttgctct gcgcgaggca caaatccatg cggctgcgct tggctatggc   120

ttgcttttat gggatggata tcggccaaga actgcggtgg actgcttcct gcgttgggca   180

gcgcaaccgg aggacaatct cacaaaagaa aaattttacc ccaatataga gcgagccgag   240

ttgattacaa agggttatgt ggcctcacaa tccagccata gccgtggaag cgcaattgat   300

cttacgctct accacctgga tacaggggaa cttgtttcaa tgggaagtaa cttcgatttt   360

atggacgaac ggtcgcatca tacagcaaaa gggatagggg atgcagaggc acaaaatcga   420

agatgcttgc gtaaaatcat ggaaagcagc ggatttcagt cttatcgctt tgaatggtgg   480

cactataagt tgattgatga gccatacc   508

<210>   877
<211>   551
<212>   DNA
<213>   Enterococcus faecium

<400>   877
atacttaggt tatgactacg ttaatgaagc actgttttct caggaaaaag tcgaatttca   60

```
aaattatgat caaaatccca aagaacattt agaaaatagt gggacttctg aaaataccca    120

agagaaaaca attacagaag aacaggttta tcaaggaaat ctgctattaa tcaatagtaa    180

atatcctgtt cgccaagaaa gtgtgaagtc agatatcgtg aatttatcta aacatgacga    240

attaataaat ggatacgggt tgcttgatag taatatttat atgtcaaaag aaatagcaca    300

aaaattttca gagatggtca atgatgctgt aaagggtggc gttagtcatt ttattattaa    360

tagtggctat cgagactttg atgagcaaag tgtgctttac caagaaatgg gggctgagta    420

tgccttacca gcaggttata gtgagcataa ttcaggttta tcactagatg taggatcaag    480

cttgacgaaa atggaacgag cccctgaagg aaagtggata gaagaaaatg cttggaaata    540

cgggttcatt t                                                        551
```

```
<210>   878
<211>   552
<212>   DNA
<213>   Enterococcus faecium

<400>   878
gtgcgttcat tatttcgttc acagtctgca cgctgttttt ggggtggaga ctggcttccg     60

tattggaggc aacacagata ccgcccatcc ctgcaactca tacaggcagc agcactgacg    120

tagtggagaa tttggaggaa aacgctcttg ccaccgccaa agaacaggga gatgaacagg    180

aatggagcct gattttagtg aacaggcaga accccatccc cgcacagtac gatgtggagc    240

ttgagcaact atcaaatggt gagcggatag atattcggat ttctccctat cttcaagatt    300

tgtttgatgc cgcaagaact gatggagttt acccgattgt cgcatccgga taccgaacaa    360

cagaaaaaca gcaagaaatt atggatgaaa aaattgccga atataaggcg aaaggctaca    420

cctctgcaca ggctaaagcg gaagcagaaa cttgggtggc cgtgccggga acgagcgagc    480

atcagcttgg tcttgctgtg gatatcaatg cggacggaat tcattcaaca ggcaacgagg    540

tttatagatg gc                                                       552
```

```
<210>   879
<211>   542
<212>   DNA
<213>   Enterococcus faecalis

<400>   879
ttgtctggta tcccctatgt aggctgcgat attcaaagct ccgcagcttg catggacaaa     60

tcactggcct acattcttac aaaaaatgcg ggcatcgccg tccccgaatt tcaaatgatt    120
```

```
gaaaaaggtg acaaaccgga ggcgaggacg cttacctacc ctgtctttgt gaagccggca      180

cggtcaggtt cgtcctttgg cgtaaccaaa gtaaacagta cggaagaact aaacgctgcg      240

atagaagcag caggacaata tgatggaaaa atcttaattg agcaagcgat ttcgggctgt      300

gaggtcggct gcgcggtcat gggaaacgag gatgatttga ttgtcggcga agtggatcaa      360

atccggttga gccacggtat cttccgcatc catcaggaaa acgagccgga aaaaggctca      420

gagaatgcga tgattatcgt tccagcagac attccggtcg aggaacgaaa tcgggtgcaa      480

gaaacggcaa agaaagtata tcgggtgctt ggatgcagag ggcttgctcg tgttgatctt      540

tt                                                                     542


<210>    880
<211>    457
<212>    DNA
<213>    Enterococcus faecium

<400>    880
aggattgcta gctttatatt tagtgacact aatctggtta gtgttattca aattacaata       60

caatatttta tcagtattta attatcatca aagaagtctt aacttgactc catttactgc      120

tactgggaat ttcagagaga tgatagataa tgttataatc tttattccat ttggcttgct      180

tttgaatgtc aattttaaag aaatcggatt tttacctaag tttgcttttg tactggtttt      240

aagtcttact tttgaaataa ttcaatttat cttcgctatt ggagcgacag acataacaga      300

tgtaattaca aatactgttg gaggctttct tggactgaaa ttatatggtt taagcaataa      360

gcatatgaat caaaaaaaat tagacagagt tattattttt gtaggtatac ttttgctcgt      420

attattgctc gtttaccgta cccatttaag aataaat                              457


<210>    881
<211>    360
<212>    DNA
<213>    Enterococcus flavescens

<400>    881
aagctgcctt atgtaggttg cggggtggcc ggttctgcct tatgtatgaa caaatggctg       60

ctgcatcaag ctgcagcagc cattggcgta caaagtgctc ctacgattct cttgacaaat      120

caagccaacc agcaagaaca aatcgaagct tttatccaga cccatggctt tccagttttc      180

tttaagccta atgaagcggg ctcctcaaaa gggatcacta aagtcacctg cgttgaagaa      240

atcgcttctg ccttaaaaga agcctttact tattgttccg cagtgctcct acaaaaaaat      300
```

```
attgccggtg ttgagatcgg ttgcggtatt ttgggcaacg actctttgac tgtcggtgct      360


<210>   882
<211>   459
<212>   DNA
<213>   Enterococcus faecium

<400>   882
gacatacgag ttggctgaat cgcttttgaa ggcaaaagaa ctggctgcta cccaagggta       60

cggattgctt ctatgggacg gttaccgtcc taagcgtgct gtaaactgtt ttatgcaatg      120

ggctgcacag ccggaaaata acctgacaaa ggaaagttat tatcccaata ttgaccgaac      180

tgagatgatt tcaaaaggat acgtggcttc aaaatcaagc catagccgcg gcagtgccat      240

tgatcttacg ctttatcgat tagacacggg tgagcttgta ccaatgggga gccgatttga      300

ttttatggat gaacgctctc atcatgcggc aaatggaata tcatgcaatg aagcgcaaaa      360

tcgcagacgt ttgcgctcca tcatggaaaa cagtgggttt gaagcatata gcctcgaatg      420

gtggcactat gtattaagag acgaaccata ccccaatag                             459


<210>   883
<211>   500
<212>   DNA
<213>   Proteus mirabilis

<400>   883
cctttgaagc tggtactgac cctgatattg cgcaagtcca agtgcaaaat aaattgcaat       60

tggcaatgcc tcttttacct caggaagtac aacaacaagg gattagtgtc gataaatctt      120

ctagttcatt cttaatggtt gcaggtttta tctctggtga tggctcgatg tcacaagatg      180

acatcgccga ctatgtaggt gcaacaatta aagatccatt aagccgtgtc acaggggtgg      240

gtgaaacgca gttatttggt acacaatacg caatgcgtat ttggttagat ccagataaac      300

tggtgaaata taacatgacc acacttgatg ttattaatgc gattaaatcg caaaataacc      360

aagtggcggc aggccaatta ggtggtacgc caccagtgcc tggtcagcgt ttaaatgtat      420

ctatcattgc gcaaactcga cttaatacac ctgagcaatt gctgatatt ctgatgaaag      480

tcaatcaaga cggttcacag                                                  500


<210>   884
<211>   280
<212>   DNA
<213>   Pseudomonas aeruginosa
```

```
<400>  884
tgtcgaagtt tttcattgat aggcccattt tcgcgtgggt gatcgccttg gtgatcatgc       60

tcgcgggcgg cctgtcgatc ctcaatctgc cggtcaacca gtacccggcc atcgccccgc      120

cggccatcgc cgtgcaggtg agctacccgg gcgcctcggc cgagacggtg caggacaccg      180

tggtccaggt gatcgagcag cagatgaacg ggatcgacaa tctgcgctac atctcctcgg      240

agagtaactc cgacggcagc atgaccatca ccgtgacctt                            280


<210>  885
<211>  477
<212>  DNA
<213>  Staphylococcus aureus

<400>  885
caatggttac aggttgtgga agaactttct ccttttaaag ctggcttata cctattacct       60

atggcaatag gagctatggt gtttgcacca attgcacccg gattagcggc gcgatttgga      120

ccgaaaatag tgttaccttc cggaattgga attgcagcca ttggcatgtt tattatgtat      180

ttctttggtc atccattatc atattctaca atggctttag cattaatttt agttgaagct      240

ggtacggctt cactagcagt tgcatctgct ctaataatgt tagaaacacc tacatcaaaa      300

gcaggtaatg cagctgctgt tgaagagtct atgtatgacc ttggaaatgt ttttggtgta      360

gcagtacttg gtagcctatc ttctatgctt tatcgtgtat ttttagatat ttcatctttt      420

tcatcaaaag gtatagttgg agatttagct catgtagctg aagaatctgt agtgggc         477


<210>  886
<211>  584
<212>  DNA
<213>  Escherichia coli

<400>  886
ctcttagacg ccctgtccga tcagatgcac cgtgtttcaa tcgacagctt ccaaccggaa       60

acccagcgct atgcgctcaa gcgcggcgtg ggctacctga acgatatcca aggatttcct      120

gaccctgcgc tctatcccga tattgctgag gcggactgca ggctggtggt tatgcactca      180

gcgcagcggg atggcatcgc cacccgcacc ggtcaccttc gacccgaaga cgcgctcgac      240

gagattgtgc ggttcttcga ggcgcgggtt ccgccttgc gacggagcgg ggtcgctgcc      300

gaccggctca tcctcgatcc ggggatggga ttttctttga gccccgcacc ggaaacatcg      360

ctgcacgtgc tgtcgaacct tcaaaagctg aagtcggcgt ggggcttcc gctattggtc      420

tcggtgtcgc ggaaatcctt cttgggcgcc accgttggcc ttcctgtaaa ggatctgggt      480
```

```
ccagcgagcc ttgcggcgga acttcacgcg atcggcaatg gcgctgacta cgtccgcacc    540

cacgcgcctg gagatctgcg aagcgcaatc accttctcgg aaac                      584
```

```
<210>  887
<211>  784
<212>  DNA
<213>  Escherichia coli

<400>  887
catcgtcaac ataacctcgg acagtttctc cgatggaggc cggtatctgg cgccagacgc     60

agccattgcg caggcgcgta agctgatggc cgaggggggca gatgtgatcg acctcggtcc    120

ggcatccagc aatcccgacg ccgcgcctgt ttcgtccgac acagaaatcg cgcgtatcgc    180

gccggtgctg gacgcgctca aggcagatgg cattcccgtc tcgctcgaca gttatcaccc    240

cgcgacgcaa gcctatgcct tgtcgcgtgg tgtggcctat ctcaatgata ttcgcggttt    300

tccagacgct gcgttctatc cgcaattggc gaaatcatct gccaaactcg tcgttatgca    360

ttcggtgcaa gacgggcagg cagatcggcg cgaggcaccc gctggcgaca tcatggatca    420

cattgcggcg ttctttgacg cgcgcatcgc ggcgctgacg ggtgccggta tcaaacgcaa    480

ccgccttgtc cttgatcccg gcatgggggtt ttttctgggg gctgctcccg aaacctcgct    540

ctcggtgctg gcgcggttcg atgaattgcg gctgcgcttc gatttgccgg tgcttctgtc    600

tgtttcgcgc aaatcctttc tgcgcgcgct cacaggccgt ggtccggggg atgtcggggc    660

cgcgacactc gctgcagagc ttgccgccgc cgcaggtgga gctgacttca tccgcacaca    720

cgagccgcgc cccttgcgcg acgggctggc ggtattggcg gcgctgaaag aaaccgcaag    780

aatt                                                                   784
```

```
<210>  888
<211>  344
<212>  DNA
<213>  Staphylococcus lugdunensis

<400>  888
gaggtgtaat tatgattcag actattgtaa ctgctgctat ctttatattg cgcaagcatt     60

agacttatta gtgattttat taatgttctt tgctagagca aagactagga aagaatatcg    120

agatatttat attggtcaat atgtaggatc tgtggcatta attgtcataa gtttattctt    180

tgcctttgtc ttaaattatg ttcctgaaaa atggatatta ggattattag ggttaatacc    240

gatttattta ggaattaaag tggctatttta tggtgatagt gacggagaag agagagctaa    300
```

```
aaaagaattg aatgaaaagg gattgtctaa attagttggt acga                    344


<210>   889
<211>   503
<212>   DNA
<213>   Pseudomonas aeruginosa

<400>   889
ctcgacccga tctacgtcga cgtcacccag ccgtccaccg ccctgttgcg catgcgccgc     60

gaactggcca gcggccagtt ggagcgcgcc ggcgacaacg ctgcgaaggt ctccctgaag    120

ctggaggacg gtagccaata cccgctggaa ggccgcctcg aattctccga ggtttccgtc    180

gacgaaggca ccggctcggt caccatccgc gccgtgttcc ccaacccgaa caacgagctg    240

ctgcccggca tgttcgttca cgcgcagttg caggaaggcg tcaagcagaa ggccatcctc    300

gctccgcagc aaggcgtgac ccgcgacctc aagggccagg ctaccgcgct ggtggtgaac    360

gcgcagaaca aggtcgagct gcgggtgatc aaggccgacc gggtgatcgg cgacaagtgg    420

ctggtcaccg aaggcctgaa cgccggcgac aagatcatta ccgaaggcct gcagttcgtg    480

cagccgggtg tcgaggtgaa gac                                            503


<210>   890
<211>   503
<212>   DNA
<213>   Proteus mirabilis

<400>   890
tgtcatcata gctcttaaca taatcgcggc tcttcttaaa tcaaggttgg caggaagttg     60

tttttttttcg atacagcgag ataaagattg ctctattcta gagtaatcgg ctgcacataa    120

ttctcggcgg atttcaacaa ttggtgtcat ttcaccaaca aattcgcact tatggaaata    180

tatttctaga agtgcattat gtttcggatc ttcgacaatt gatgtcaata tgtaaataag    240

caattctctt aatacaaata gtggatcatc tggatatttt gattgatact ctaattctaa    300

tgattctatt tttaagtcgg tgagttcaca cgcttcagta aataaatcca ctttattctt    360

aaagtgccaa tatattgcac ctcgagttac tccggcctcg gttgcaatat ctgaaagtga    420

tgtggcagaa acaccttgca cagtaaatag cctaagtgca gcatcaataa tctgctgtct    480

tgtctcttgt gcttggcgtt tag                                            503


<210>   891
<211>   343
```

```
<212>   DNA
<213>   Enterococcus faecalis

<400>   891
gaccaggagt tggtggtttt attgcttatt taggaattcg cgctccattt tttgcggccg        60

cattttttagc gtttattggt tttattttga cattaactgt tttgaaggag ccagagaaac       120

gaatttttagc cgctgttgaa gcgaaaaaag gttcatttat ggatatttta agaaatccaa      180

tgtttacctc attatttgtg attatcttaa tttcctcttt tggcctgcaa gcgttcgaat       240

ctatttatag tattatggcg accattaatt ttggctttac cacaagtgaa atagcaatcg      300

tgattacggt tagtggtatt ttagcgttga tttgtcagct gtt                        343


<210>   892
<211>   544
<212>   DNA
<213>   Proteus mirabilis

<400>   892
ctggctctgt tagtgctttc aggcagcttg gttgttgctg gatgtggcga caaaaatcag       60

tctgctggag gtccacctcc tgctcctgct gtaggtgttg ttacattaga tgcgaaacca      120

ctgactatca caacagactt acctggtcgt acatctgctt atcgtatcgc agaggttcgc      180

cctcaggttg gcggcatcat cttaaaacgc aattacaccg aaggtagtta tgtagaagca      240

ggaacatctt tataccaaat cgatcctgct attttttcaag ctacattaaa cagtgctcaa     300

gctgatttag caaaagcgaa agcgaatgct gaaattgctc gtctgactgt agagcgctat      360

aaacctctac tcggcaccaa ttatgtcagt aaacaagatt ttgataccgc aacatctcag      420

tacgctcaag ctgttgctgc agtaaaaagca gctgaagcta cagtgactaa tgcaaaaatt     480

aatcttgaat ataccaaagt caccgcacca atttctggcc gttcaggtaa atcaacggta      540

acag                                                                   544


<210>   893
<211>   573
<212>   DNA
<213>   Proteus vulgaris

<400>   893
cctgaaatcc actactgacc ggctccagcc gctgaccttta gatacctgcc agcaagctaa      60

ccccgaactg accgcccgcg cagcgtttag catgaatgtc cgaacgtttg tgctggtgaa      120

agataaaaaa acattctgtt catctgcgac cggtgagatg gacattccac tcaatgaatt      180
```

```
gattccggcg ctcgacatta ataaaaacgt cgatatggcg atcttacccg gcacgccgat    240

ggtgccgaac aaacccgcaa tcgtcatctg gtatcgcaac cctttgctga aaaatagcgg    300

cgtctttgcc gctctgaatc tcaacctgac gccttcactc ttttatagtt cacggcagga    360

agattacgat ggcgtcgccc tcattattgg caatactgcg ctatctacct tttcttcacg    420

tttgatgaac gttaacgaat taaccgacat gccagtccgt gaaactaaaa ttgcgggcat    480

tcctctgacc gttcggcttt atgcagatga ctggacatgg aacgatgtgt ggtacgcatt    540

tttactgggc ggcatgagtg gaactgtcgt tgg                                 573
```

```
<210>   894
<211>   581
<212>   DNA
<213>   Streptococcus mutans

<400>   894
gaaatgatat tgacgggact ttcataaaaa ttttcaagga cttgaggtgt aataatatct     60

tttttaggac cttgagccac tattttacct ctacgaagga ggaggatatg actcatttta    120

tcagtgattt cttcagcatg gtgggtaaca taaaggatag ttggagcatg tggtaactca    180

gtaatctttt caacttgtgt tagcaatttt tcacgggcaa aaagatccag tccgctggtt    240

gcttcatcca aaataatgat ttcaggatct tccataaggc tgcgcgcaat aaggaggagt    300

tgtttttcac cttgtgagag gctgctatag atgcgaccaa gcaagtgttt ccgccgatg     360

acagtaagca tttggcgtgc ttcattaagt tctgtttcgt cgtattcctt gtagagaatg    420

cttgatttgt atttaccagt tagcacgatc ttttcagcca acatatttgc agggagtcgc    480

tcagcaataa aagagcccac gacaccgatt ttagtccgca tattgggaat atcaccctga    540

ccaaacctag tattgagaat ttcaacctgt ccttgtgttg a                        581
```

```
<210>   895
<211>   281
<212>   DNA
<213>   Escherichia coli

<400>   895
aaggctggct ttttcttgtt atcgcaatag ttggcgaagt aatcgcaaca tccgcattaa     60

aatctagcga gggctttact aagcttgccc cttccgccgt tgtcataatc ggttatggca    120

tcgcatttta ttttctttct ctggttctga aatccatccc tgtcggtgtt gcttatgcag    180

tctggtcggg actcggcgtc gtcataatta cagccattgc ctggttgctt catgggcaaa    240
```

.

```
agcttgatgc gtggggcttt gtaggtatgg ggctcataat t                    281


<210>   896
<211>   609
<212>   DNA
<213>   Staphylococcus aureus

<400>   896
attagaaatt gcgactggtg caatcactgc aggtacatta attgcaatga tattttatgt    60

tattcagtta tctatgcctt taatcaatct ttccacgtta gttacagatt ataaaaaggc   120

agtcggtgca agtagtagaa tatacgaaat catgcaagaa cctattgaac cgacagaagc   180

tcttgaagat tctgaaaatg tattaattga tgacggtgta ttgtcatttg aacatgtaga   240

ctttaaatat gatgtgaaga aaatattaga tgatgtgtcg ttccaaatcc cacaaggtca   300

agtgagtgct tttgtaggcc cttctgggtc tggtaaaagt acgatattta atctgataga   360

acgtatgtat gaaattgagt caggtgatat taaatatggc cttgaaagtg tctatgatat   420

cccgttatct aagtggcgac gcaaaattgg atatgttatg caatcaaatt cgatgatgag   480

tggtacaatt agagacaata ttttatacgg aattaatcgt catgtttcag atgaagaact   540

tattaattat gctaaattag cgaactgtca tgattttatc atgcaatttg atgaaggata   600

tgacacgct                                                         609


<210>   897
<211>   274
<212>   DNA
<213>   Staphylococcus aureus

<400>   897
ttggatagtt caacaaaaac attaacagaa gataaacagg tttaccgtgt ggagggtttc    60

tcgtgtgcga attgtgctgg gaagtttgaa aaaaatgtaa aagaactatc aggggtgcat   120

gatgctaaag tcaatttcgg agcttccaaa attgatgtct ttggcagtgc aaccgttgaa   180

gatctggaaa aggctggtgc tttcgagaat cttaaagtgg caccagagaa ggctagaaga   240

agggtcgaac cagtggtaac agaagataaa aatg                             274


<210>   898
<211>   532
<212>   DNA
<213>   Klebsiella oxytoca

<400>   898
tgagcagcgt aaccagacat ggctggagtt ggtgggggaa gcgcagcagc tcatgggcga    60
```

```
acgctgcccg gcagatgagc cgcgggcgat tgcgctggca acccgctgga tggagcagct   120

ggagcaggat accgccggca ggccggagtt tctgactcgc ctgaatgaga tgcacgccgc   180

cgaaccgcag atgcgtgaac aaactggggt gacgccggag atgattgatt tcattacccg   240

tgcttttgcc gaaagcaagc tggccatctg ggcgcgctat ctgaacgccg aagagctggc   300

ctttacccgg cagcactatt tcgatcgcct gatggagtgg ccggcgctgg tggccgacct   360

gcatcgggcc tgtcgtgaga agcgagaccc ggcctccccg gaaggtcagc agctggcgca   420

gcgctggctg cgctgttcc agtcttacgc gggtaaagat gcgcagacgc agcagaagtt   480

tcgctatgcc atggagcagg agccgcattt gatgaaagga acgtggatga ct          532
```

```
<210>    899
<211>    500
<212>    DNA
<213>    Klebsiella pneumoniae

<400>    899
atgaaaaacc ctcatcaaaa actttcatca tcaccattag cagtggtgcg cagtattgcc    60

actcactgga gtattattct gcagatggct aaacgtgatg ttgttggaag atataaaggt   120

tctgtgatgg gcctgctttg gtctttttttg aaccctttat ttatgttaac agtatatact   180

tttgtcttct ccgtggtatt caaagccaga tggtcaactg gtggggacga aagtaggaca   240

cagtttgcta taattttatt tgtcggaatg atagttcatg gttttttaag tgaagtggta   300

aataaagcgc cgttgattat tttgggaaat acaaactatg tgaagaaagt tatatttcca   360

ttggaaacgc tgcctgttat ctctttattt gcggcattat ttcatacttg tatcagcctt   420

tgtgtgttac tgatggcgtt tttcattttt aatggatatt tacattggac catagtgttt   480

ttacctttgg tcttttttccc                                            500
```

```
<210>    900
<211>    370
<212>    DNA
<213>    Enterococcus faecium

<400>    900
agaacatatc cgcaaacaag gagaaggaat ccttctctct ccgaaagtaa gctttcaagt    60

atatcagcaa aagggttatc aaatgacatc tgaagaatcc atcattcgtt ttgtcatgag   120

acaaacagag ttttcagaat cgcttgtccg tagtttgctg aatcacttag gggttgctca   180

ggaaactctg acgaaaccgt tatgtacatt aagtggggga gaagcgaccc gtctgacgat   240
```

```
tgctttgctt  tttactaagc  caagtaatgt  gttgctgtta  gatgaaccga  ctaattttat      300

tgatatggca  acgatcgaag  ctttagagaa  gctaatgcaa  atatatccgg  gaacgatttt      360

gtttacatca                                                                  370
```

```
<210>   901
<211>   400
<212>   DNA
<213>   Escherichia coli

<400>   901
aaccgtttat  acgttggtga  gttggttggc  cattctggga  tactggttgc  tcattgcagg       60

cgtaacttta  cgcattctaa  tgaaacgacg  cgcagttccc  tccgcgatgg  cctggctgtt      120

gattatttac  attctgccgt  tagtcggaat  tattgcctat  cttgccgttg  gcgagctcca      180

tttaggcaaa  cgccgcgctg  agcgcgccag  agcgatgtgg  ccttccaccg  caaaatggct      240

taacgacctt  aaagcctgta  agcatatctt  cgccgaagaa  aatagcagtg  tcgctgcgcc      300

attattcaag  ctttgcgagc  gtcgtcaggg  gatcgctggg  gtcaaaggga  atcagctaca      360

actgatgacc  gagtcagatg  atgtgatgca  ggcgttaatc                             400
```

```
<210>   902
<211>   540
<212>   DNA
<213>   Klebsiella pneumoniae

<400>   902
atgttctcgc  tgcagttctg  gcctatgaga  aagggatgat  cctggccaac  gataaaccag       60

agcctacaaa  acttgcagag  aaccgctctt  ctgaaacttg  cagtttggaa  gacctcaaaa      120

gcattcagtt  acatactgct  aatgaagaaa  ttggggaaaa  acgttttggt  actgcgcgtg      180

ctattattaa  aaatcttacc  atctacaaat  cagatggtac  gactttgaca  gagaaaccac      240

tcatcaaatc  aggtgaagaa  gttacatttg  atttcaccat  attagctacc  gaagagatta      300

aggatgttgc  tcttggcctt  tccatatcca  aagctcaggg  agggggatatt  tggggagata      360

gtaatattgg  cgcaggttca  ccaattacac  ttcgtccagg  tagtcagcgt  atcgtttata      420

aagcaacgct  gcctataaat  tcgggcgatt  acctaataca  ctgcggcctc  gctatggttg      480

gcaacggtgc  tcgagaggag  cttgatcaac  gtcgcccgat  gatgaaaata  aagttttggt      540
```

```
<210>   903
<211>   770
```

```
<212>   DNA
<213>   Klebsiella pneumoniae

<400>   903
ataaagcaat gaagcctaaa gttatcgctt ctattgtatt atttaatcat tcctatgatg      60

atattaaaga tacgttcctc tcattatgcc atgaagagag cgttgaaaaa ataatcttcg     120

ttgataatgg tggttgtcag tgggcggcat cattgaatga acctaaggtg agctacatca     180

agtctcctta caactgtggt tttggtgctg gacataatct tgcaataaaa gcaagtgcag     240

actttgacgg ttattttctt atatgtaatc cggatataag ctttgataag cagtcacttg     300

ataaattagt ttcgtttgcg tgggaaaatg agtatagttt tttgttttcc ccgcaaataa     360

tatatagaaa tggtgagaga caatatagtt gccgtgtact acctactccc ggtaatcttt     420

taagacgttt ctttccagtg actgcaataa agtacgatgt taaatatgaa ctgaaagatg     480

cagcctatga tgagatattt tccccaccaa cggtatgtgg ctgtttcatg ttattaagta     540

atgtattatt gcaaaaactt aacggttttg atgaacgata ctttatgtat ctggaagatg     600

tagatttatg tcgccgagca ttacagctaa ccaaaatata ctattatcct ggaacaacta     660

ttgtccatgc ctttaataaa ggttcgtata aaagcaaatt attactttgg taccatattc     720

gctccgcagt ttcctatttt aataaatggg gatggttcct tgatcgtaaa               770


<210>   904
<211>   614
<212>   DNA
<213>   Staphylococcus aureus

<400>   904
ggttacttgt tgctgctttt gcgttatctc aaatgattat atcgccgttt ggtggtacgc      60

tagctgacaa attagggaag aaattaatta tatgtatagg gttaatttta ttctcagtgt     120

cagaatttat gtttgcagtt ggccacaatt tttcggtatt gatgttatcg agagtgattg     180

gtggtatgag tgctggtatg gtaatgccgg tgtgtgacagg tttgattgca gatgtttcac     240

caagccatca aaaagcaaaa aactttggct acatgtcagc gattatcaat tctggattca     300

ttttaggacc agggattggt ggatttatgg cagaagtttc acatcgtatg ccattttatt     360

ttgcaggtgc attaggcatt ttagctttca taatgtcagt tgtattgatt catgatccga     420

aaaagtctac gacaagcggc ttccaaaaac ttgagcccca attattaaca aaaattaatt     480

ggaaagtctt tattacgcca gcaattttaa cgctcgtctt agcgttcggt ttatcggcat     540

ttgaaacact gtattcttta tatacatcgt ataaagtaaa ttattcacct aaagatattt     600
```

```
cgattgcgat tacg                                                    614


<210>   905
<211>   411
<212>   DNA
<213>   Pseudomonas aeruginosa

<400>   905
gaactacccc gtgaatcccg acctgatgcc cgcgctgatg gcggtcttcc agcatgtgcg   60

gacgcgcatc cagagcgagc tcgattgcca gcgactcgac ctgaccccgc ccgacgtcca   120

tgtattgaag cttatcgacg aacaacgcgg gctgaacctg caggacctgg gacgccagat   180

gtgccgcgac aaggcactga tcacccggaa gatccgcgag ctggagggaa gaaacctggt   240

ccgccgcgag cgcaacccca gcgaccagcg cagcttccag ctcttcctca ccgacgaggg   300

gctggccatc caccagcatg cggaggccat catgtcacgc gtgcatgacg agttgtttgc   360

cccgctcacc ccggtggaac aggccaccct ggtgcatctc ctcgaccagt g           411


<210>   906
<211>   401
<212>   DNA
<213>   Escherichia coli

<400>   906
gcaaggaccg ttctatcatg gaaccaaagc caatttggcg attggtgact tgctaaccac   60

agggttcatc tctcatttcg aggacggtcg tattcttaag cacatctact tttcagcctt   120

gatggagcca gcagtttggg gagctgaact tgctatgtca ctgtctggcc tcgagggtcg   180

cggctacata tacatagttg agccaacagg accgttcgaa gacgatccga atcttacgaa   240

caaaaaattt cccggtaatc caacacagtc ctatagaacc tgcgaaccct tgagaattgt   300

tggcgttgtt gaagactggg aggggcatcc tgttgaatta ataaggggaa tgttggattc   360

gttagaggac ttaaagcgcc gtggtttaca cgtcattgaa g                      401


<210>   907
<211>   742
<212>   DNA
<213>   Staphylococcus aureus

<400>   907
tacgatgaca ccagtctttg aattgaaaaa tgtcaattac tactatgatc ataaaaaagt   60

gttagaaaat ataaacatta aaataaataa aggtgaattt ttagcaattg ttggaccaaa   120
```

```
tggtgctggt aaatcaacat tattgaagtt gattctaggg ttattacctt tacaaagtgg      180

tgagattttt gttggaggta ttgattttaa aaataagaaa acatccatta aattaagcta      240

tgtatcacaa aaagcaaatg cctttaattc aggtttccca gcaagtgtta aagaagttgt      300

tttaagcgga ttaacaaaga caaaacgtct tttccaaaca tttaatagca aagataatga      360

aaaagtgatt aaagtactag aaagactgaa tataagtgat ttaattcata aaaatatagc      420

agaattatca ggtggtcaac aacaacgtgt aatgattgct cgagcattga tttcagaacc      480

tgcagtatta gtacttgatg aaccaacgaa tggtattgat gcaaaacatg taagtgaatt      540

ttataatact ttagatcaat aaaacaaga aggtatcacc attatcttag ttactcatga      600

tatcggtgtt gtagcagata ctgctactga agtagcatgt ttaaataagc atttgcattt      660

ccatggtaca actgatgagt ttaaatcact tgatgaagtt gaaatttcaa aaatttatgg      720

acatcctgta cgttttgtcg at                                              742
```

```
<210>   908
<211>   352
<212>   DNA
<213>   Staphylococcus aureus

<400>   908
tagcaacctc cctttgatac aagaaagctt tttctacaag ctgtttaaca tgctcatcat       60

ctagtgaata atagactact tttccttctt tacggtattt tgctatacct aaattttttca     120

ataatcttaa atgatgggat gccgtagccg ttgaagattc aatgatatta gctacatcac      180

aaacacataa ctctccctct aaagacaaaa cataagcaat tttaactctt gtatcatctg      240

atagagcctt aaaaactttc gctacatcca taggattctg tttagcaagg tctttttttag      300

ccctgtttac cttatcttca tgaatatagg taacttcaca catatctttt gt              352
```

```
<210>   909
<211>   583
<212>   DNA
<213>   Enterococcus faecalis

<400>   909
gcgtagaacg tggacttgat ccattgaaga caatgcttgt ggtcatgagc aattctgaaa       60

attcaggtgg cctggtactc gctgcttccc ctatggcaaa aaaagtatta ggtatttcca      120

atgttacaag gaaaaatgaa gttccggacc acccaaactt aattattgta cctccacgca      180

tgaaattata catgaagaaa aatcaagaaa ttaacaattt atataaccgc tttgtttcta      240
```

```
atgaagatca ttctgtattc agtgtcgatg aatcgtttct tgatgtgact gcttcgctga    300

cctattttaa gtgtgacacc gcctataaac tggccaagat tattcaacgt gtgatttata    360

accatatggg attgtatgta acaatcggaa ttggggaaaa tccgttgctg gccaagttag    420

cattggataa tgaagcaaag aatgcaccag gctttgtggc tgaatggcgc tatgaagatg    480

tgccagaaaa agtttggcca atctcccctc ttacagaatt ttgtgggata ggaaatcgca    540

tggctgctcg cttaaaaaag ctaggtattc ggtccattta tga                     583
```

```
<210>    910
<211>    231
<212>    DNA
<213>    Candida albicans

<400>    910
atggcttgtt ctgctgctca atgtgtctgt gctcaaaaat ccacttgttc atgtggtaaa     60

caaccagctt taaaatgtaa ttgttctaaa gcttcagtag aaaatgttgt tccatcatca    120

aatgatgctt gtgcttgtgg aaaaagaaat aaatcaagtt gtacttgtgg tgctaatgct    180

atttgtgatg gtactagaga tggtgaaact gatttcacta acttgaaata a            231
```

```
<210>    911
<211>    240
<212>    DNA
<213>    Candida albicans

<400>    911
ctaagatgtc gtcgcaagat gaatctaaat tagaaaaggc aattagtcaa gactcttcct     60

cagaaaacca ttccattaat gaataccacg ggtttgatgc ccatacaagt gaaaacattc    120

agaatttagc cagaactttc actcatgatt ctttcaaaga tgactcgtca gcaggtttat    180

tgaaatactt aacccatatg tcagaagtgc ccggggtcaa tccatatgaa catgaagaaa    240
```

```
<210>    912
<211>    513
<212>    DNA
<213>    Candida albicans

<400>    912
gctgaattat ctaaattacc aagagataat gatccagaag cacttttgaa atatgctgca     60

ccactttgga aacaatactt attggtcagt tggagaacta ttgttcaaga ttggagatca    120

ccaggatata tttattctaa aatctttttg gttgtttcag cagcattatt taatggattt    180

tcattttca aagctaaaaa caacatgcaa ggtttacaaa atcaaatgtt ttcggtgttt    240
```

```
atgtttttca ttccatttaa tactttggtg caacaaatgt taccatactt tgtgaagcaa      300

cgtgatgttt atgaagtgag agaagctcca tcaagaacat tcagttggtt tgcatttatt      360

gccggtcaaa ttacatcaga aattccttat caagttgccg ttggtaccat agcatttttc      420

tgttggtatt atccattagg attgtataat aatgctacac caactgattc tgtcaatcct      480

cgaggtgttt taatgtggat gcttgttact gca                                    513
```

<210> 913
<211> 609
<212> DNA
<213> Candida albicans

<400> 913
```
ggtggtaaat taagagattt ggtcatccgt gatgctccac tcaaacaaca attattgcaa       60

gaagctaaaa ctttacctgc tttgacgtta actgctagac aattatgtga tttagaatta      120

attttaaacg gagggttttc tccattaact ggattcttaa atcaagaaga ttataatagt      180

gttgttaacg atttaagatt aagtagtgtt aagaatgaat caaatggtaa aggtttatta      240

tggccaatcc caatcacctt agatgttgat gagaccactt ctaaaaaaca ttctgttggt      300

gatagaattg tattaataga tttgagagat gaaactccat tggccatttt aactattgaa      360

tctatttata aacctgataa aaaattagaa gcaaaaaaag tgttccgtgg tgatccagaa      420

catcctgcta ataaatattt attagaaacc gctggcgatt attatatcgg tggtgaatta      480

caagggatca attatcctaa acattatgat tatgttgatg ctagaaaaac accaactgaa      540

ttgagacaag aatttgaaaa attgggttgg gctcaagaaa atattgttgc ctttcaaacc      600

agaaatcct                                                             609
```

<210> 914
<211> 528
<212> DNA
<213> Candida albicans

<400> 914
```
tcatggatta tttgttcgtg gtgctaacca aatggatggg ccagagatgg ttacccagtg       60

tcctatccca cctggtgaaa catacttgta caacttcact gttactgatc aagtgggaac      120

ttattggtat catagccata caggggggtca gtatggagac ggtatgagag gtgtctttat      180

tattgaagat gatgatttcc cgtatcacta cgatgaagaa gttgttttaa ctttaagtga      240

ccattaccac aaatattcag gtgacatagg gcctgccttt ttaaccagat ttaatccgac      300
```

```
aggagcagaa ccgatccctc agaactttt  gttcaatgaa acaagaaatg ccacttggaa    360

ggtcgaacct ggaaaaactt actttgttag gattcttaat gttggtggtt ttgtatcaca    420

gtacttgtgg atggaagatc atgaatttac tattgttgag atcgatggcg tttacgttga    480

aaaaaacacc actgatttga tttatatcac agttgctcaa agatatgg                 528
```

```
<210>   915
<211>   585
<212>   DNA
<213>   Candida albicans

<400>   915
aaacggtcca gagttgaaga aaaagttgta tcgtcagatt tggctagggg cggggctagg     60

tgttcttatt tgtataatca ttggtggcgc ttttattggt accttttacg ggttgggtaa    120

agatatctgg ggaaaatcag aagacttgtg ggaagggata ttttgtatca ttgccacagt    180

cttgatcact gctatgggta ttccaatgtt gagaatcaac aagatgaaag aaaaatggag    240

agttaaatta gcacaagctt taatcaaatc tccagaaaat aagaagaacc gattcaaatt    300

gggatatctt gggaaaaagt acgcactttt tattttgcca ttcatcactt gcttgcgtga    360

aggtttagaa gctgttgttt tcgttggtgg ggtcggtatt actagtcctg cttcatcttt    420

cccaatccca gttattgttg gtataatttg tggtcttgca gtgggtgcct tgttgtacta    480

ctttggttcc aatatgtcga tgcaaatctt cttgatcatc tccacttgta tcttgtactt    540

gatcgctgct ggtttgttct ccagaggtgt ctggttcttt gagag                    585
```

```
<210>   916
<211>   560
<212>   DNA
<213>   Candida albicans

<400>   916
tgttattggt tatggtgttg gcccattggt tttcagtccg atgtcagaaa atgctatatt     60

tggtcgtaca tccatatata tcataacatt attttattt  gtcatactac aaatccccac    120

tgctttggta aataatattg ccggtttatg tatattgaga ttcttgggtg gattctttgc    180

tagtccttgt ttggccactg gtggtgctag tgttgctgat gtggttaaat tttggaattt    240

accagttggg ttagccgctt ggagtttggg tgctgtttgt ggtcctagtt ttggtccatt    300

ctttggttca attttaactg tcaaagccag ttggagatgg actttttggt tcatgtgtat    360

tatttctggg ttttcatttg ttatgttgtg tttcacttta cctgaaactt ttggcaaaac    420
```

```
attattgtat cgcaaggcta aaagattgag agccatcacc ggtaacgaca gaatcacaag      480

tgaaggagaa attgaaaata gcaaaatgac aagtcatgaa ttgatcattg atacattatg      540

gagaccatta gaaatcaccg                                                  560
```

```
<210>   917
<211>   574
<212>   DNA
<213>   Candida albicans

<400>   917
attccttggt ttggttctgc agcttcatat ggtcaacaac cttatgaatt tttcgaatca       60

tgtcgtcaaa agtatggtga tgtattttca tttatgttat tagggaaaat tatgacggtt      120

tatttaggtc caaaaggtca tgaatttgtt ttcaatgcta aattatctga tgtttctgct      180

gaagatgctt ataaacattt aactactcca gttttcggta aaggggttat ttatgattgt      240

ccaaattcta gattaatgga acaaaaaaaa tttgctaaat ttgctttgac tactgattca      300

tttaaaagat atgttcctaa gattagagaa gaaattttga attattttgt tactgatgaa      360

agtttcaaat tgaaagaaaa aactcacggg gttgccaatg ttatgaaaac tcaaccagaa      420

attactattt tcactgcttc aagatcttta tttggtgatg aaatgagaag aattttttgac      480

cgttcatttg ctcaattata ttctgattta gataaaggtt ttacccctat taattttgtt      540

ttccctaatt tacctttacc tcattattgg agac                                  574
```

```
<210>   918
<211>   647
<212>   DNA
<213>   Candida albicans

<400>   918
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acaccgtgca agaaattgat ctgttattga ttgctttcaa agacctcctt agacttttac      120

gacccaaaga taaatccaac aaattcgata catacgaatt gaaatttcat tctttgaagc      180

acaaattgcg tgagttgcaa gtatttatta atgatcaaca acaagacaag ttgcatgaat      240

ataggataaa gcatttccat ctacaagatc tgcctgtgga taccatcaat aacgaatttg      300

ctcgagacca attatttgct gatcgttcca ctaagaagac taagaaagaa atggaagcat      360

ctataaatca acaaattgtc agccaaaata aacaaataac aaaatccttg caagcatcga      420

gacaattgtt atcagcaggt atattgcaga gtgaattgaa cattgacaac attgatcagc      480
```

```
aaaccaagga tttatacaag ttaaatgaag gatttatcca attcaacgat ttgttaaata      540

gatctaagaa aattgtcaag tttattgaaa agcaagataa agctgaccgt caacgtatat      600

atttgagtat ggggttcttc atactttgtt gttcttgggt ggtttat                   647


<210>    919
<211>    552
<212>    DNA
<213>    Glycine max

<400>    919
atccaagttg aaagagataa attgaacaag tatggtcgtc ccctattagg atgtactatt       60

aaacctaaat tggggttatc cgctaagaat tatggtagag ctgtttatga atgtcttcgt      120

ggtggacttg attttaccaa agatgatgaa aatgtgaatt cccaaccatt tatgcgttgg      180

agagaccgtt tcttattttg tgccgaagcc attttttaaat cacaggctga aacaggtgaa      240

atcaaagggc attacttgaa tgcaactgcg ggtacatgcg aagaaatgat gaaaagagct      300

gtatttgcca gagaattagg cgttcctatc gtaatgcatg attatttaac agggggattc      360

actgcaaata ctagcttagc tcattattgc cgagataatg gtctacttct tcatatacac      420

cgtgcaatgc atgcagttat cgacagacaa aagaatcatg gtatgcactt tcgtgtacta      480

gctaaagcat tacgtttgtc tggtggagat catgttcacg ccggtaccgt agtaggtaaa      540

cttgaagggg aa                                                         552


<210>    920
<211>    358
<212>    DNA
<213>    Homo sapiens

<400>    920
gctcaagggg caaatgcagc atgtacagca ttggcagtgg tgcctcagag gtggcagaac       60

tatttcacac aaaccagttt aggactacac aaattagtac catccagcat caggatatag      120

ctgtggattt tacaaaccat tcctatttct aacttcagga attgatgttt ttcccagtcc      180

atcttaaaat attactgctt taatcacaga tcagataaaa aggatatcag gcacaacctc      240

caactaaagt cctgttgtag catagacagt gaaatgctat gacatcagaa gactttaaaa      300

ttgcagctct tttcggatcc cccaaagtgt gtctgcacgc ttcttcaaac gggcctct        358


<210>    921
<211>    271
```

```
<212>   DNA
<213>   Homo sapiens

<400>   921
cggagtcaac ggatttggtc gtattggatg cctggtcacc agggttgctt ttaactctgg      60

aaaagtggat attgtcgcca tcaatgaccg cttcattgac ctcaactaca tggtctacat     120

gttccagtag gattttacct atggcaaatt ccatgcaccg taaaggctga gaatgggaag     180

cttgtcatca gtggaaatcc cattaccatc ttccaggagc gagatccctc caaaatcaaa     240

tggggcaatg ctgacgctga gtacgttgtg g                                    271


<210>   922
<211>   239
<212>   DNA
<213>   Homo sapiens

<400>   922
atggataatg atatcgccac gctcgtcatg gacaatggct ctcccatgtg caaggccagc      60

ttagcaggcg acgatgcccc tccatcgtga ggcacccatg gcaccagggc atgatcgtgg     120

gcatgggtca gaagaagtcc tacgtggaca atgaggccca gggcaagaga agcatcctga     180

ccctgaaata ccctatcgag catggcattg tcaccaatgg agaagatctg gcaccacac      239


<210>   923
<211>   365
<212>   DNA
<213>   Homo sapiens

<400>   923
gccaaattgc caaaactcaa gtcacctcag taccatccag gaggctgggt attgtcctgc      60

ctctgccttt tctgtctcag cgggcagtgc ccagagccca cacccccca agagccctcg     120

atggacagcc tcacccaccc cacctgggcc cagccaggag ccccgcctgg ccatcagtat     180

ttattgcctc cgtccgtgcc gtccctgggc cactggcctg gcgcctgttc ccccaggctc     240

tcagtgccac caccccggc aggccttccc tgacccagcc aggaacaaac aagggaccaa     300

gtgcacacat tgctgagagc cgtctcctgt gcctcccccg ccccatcccc ggtcttcgtg     360

ttgtg                                                                 365


<210>   924
<211>   342
<212>   DNA
<213>   Homo sapiens
```

<400> 924
caccctggat ttgcatacat tcttcaagat cccatttgaa tttttagtg actaaaccat   60

tgtgcattct agagtgcata tatttatatt ttgcctgtta aaaagaaagt gagcagtgtt   120

agcttagttc tcttttgatg taggttatta tgattagctt tgtcactgtt tcactactca   180

gcatggaaac aagatgaaat tccatttgta ggtagtgaga caaaattgat gatccattaa   240

gtaaacaata aaagtgtcca ttgaaaccgt gatttttttt tttttcctgt catactttgt   300

taggaagggt gagaatagaa tcttgaggaa cggatcagat gt   342

<210>   925
<211>   552
<212>   DNA
<213>   Glycine max

<400>   925
atccaagttg aaagagataa attgaacaag tatggtcgtc ccctattagg atgtactatt   60

aaacctaaat tggggttatc cgctaagaat tatggtagag ctgtttatga atgtcttcgt   120

ggtggacttg attttaccaa agatgatgaa aatgtgaatt cccaaccatt tatgcgttgg   180

agagaccgtt tcttattttg tgccgaagcc attttaaat cacaggctga aacaggtgaa   240

atcaaagggc attacttgaa tgcaactgcg ggtacatgcg aagaaatgat gaaaagagct   300

gtatttgcca gagaattagg cgttcctatc gtaatgcatg attatttaac aggggggattc   360

actgcaaata ctagcttagc tcattattgc cgagataatg gtctacttct tcatatacac   420

cgtgcaatgc atgcagttat cgacagacaa aagaatcatg gtatgcactt cgtgtactaa   480

gctaaagcat tacgtttgtc tggtggagat catgttcacg ccggtaccgt agtaggtaaa   540

cttgaagggg aa   552

<210>   926
<211>   286
<212>   DNA
<213>   Pseudomonas aeruginosa

<400>   926
caggcctaac acatgcaagt cgagcggatg aagggagctt gctcctggat tcagcggcgg   60

acgggtgagt aatgcctagg aatctgcctg gtagtggggg ataacgtccg gaacgggcg   120

ctaataccgc atacgtcctg agggagaaag tggggatct tcggacctca cgctatcaga   180

tgagcctagg tcggattagc tagttggtgg ggtaaaggcc taccaaggcg acgatccgta   240

actggtctga gaggatgatc agtcacactg gaactgagac acggtc   286

```
<210>    927
<211>    643
<212>    DNA
<213>    Enterococcus faecium

<400>    927
aggataggta ggagccgtag aaatcggaac gctagtttcg atggaggcgc tggtgggata      60

ctacccctgc gttatggcca ctctaacccg caccactaat cgtggtggga gacagtgtca     120

gatgggcagt ttgactgggg cggtcgcctc ctaaaaggta acggaggcgc ccaaaggttc     180

cctcagaatg gttggaaatc attcgaagag tgtaaaggca gaagggagct tgactgcgag     240

accaacaagt cgagcaggga cgaaagtcgg gcttagtgat ccggtggttc cgcatggaag     300

ggccatcgct caacggataa aagctaccct ggggataaca ggcttatctc ccccaagagt     360

ccacatcgac ggggaggttt ggcacctcga tgtcggctcg tcgcatcctg gggctgtagt     420

cggtcccaag ggttgggctg ttcgcccatt aaagcggcac gcgagctggg ttcagaacgt     480

cgtgagacag ttcggtccct atccgtcgcg ggcgttggaa atttgagagg agctgtcctt     540

agtacgagag gaccgggatg gacttaccgc tggtgtacca gttgttctgc caaggttttt     600

gctgggtagc tatgtaggga agggataaac gctgaaagca tct                      643


<210>    928
<211>    245
<212>    DNA
<213>    Streptococcus pyogenes

<400>    928
gcgtgagtga aagaaggttt tcggatcgta aagctctgtt gttagagaag aatgatggtg      60

ggagtggaaa atccaccaag tgacggtaac taaccagaaa gggacggcta actacgtgcc     120

agcagccgcg gtaatacgta ggtcccgagc gttgtccgga tttattgggc gtaaagcgag     180

cgcaggcggt tttttaagtc tgaagttaaa ggcattggct caaccaatgt acgctttgga     240

aactg                                                                 245


<210>    929
<211>    240
<212>    DNA
<213>    Streptococcus pneumoniae

<400>    929
ccacactggg actgagacac ggcccagact cctacgggag gcagcagtag ggaatcttcg      60
```

```
gcaatggacg gaagtctgac cgagcaacgc cgcgtgagtg aagaaggttt tcggatcgta      120

aagctctgtt gtaagagaag aacgagtgtg agagtggaaa gttcacactg tgacggtatc      180

ttaccagaaa gggacggcta actacgtgcc agcagccgcg gtaatacgta ggtcccgagc      240
```

```
<210>   930
<211>   242
<212>   DNA
<213>   Streptococcus agalactiae

<400>   930
cacggcccag actcctacgg gaggcagcag tagggaatct tcggcaatgg acggaagtct       60

gaccgagcaa cgccgcgtga gtgaagaagg ttttcggatc gtaaagctct gttgttagag      120

aagaacgttg gtaggagtgg aaaatctacc aagtgacggt aactaaccag aaagggacgg      180

ctaactacgt gccagcagcc gcggtaatac gtaggtcccg agcgttgtcc ggatttattg      240

gg                                                                     242
```

```
<210>   931
<211>   250
<212>   DNA
<213>   Enterococcus faecium

<400>   931
gtgcattagc tagttggtga ggtaacggct caccaaggcc acgatgcata gccgcacctg       60

agagggtgat cggccacatt gggactgaga cacggcccaa actctacggg aggcagcagt      120

agggaatctt cggcaatgga cgaaagtctg accgagcaac gccgcgtgag tgaagaaggt      180

tttcggatcg taaaactctg ttgttagaga agaacaagga tgagagtaac tgttcatccc      240

ttgacggtat                                                             250
```

```
<210>   932
<211>   263
<212>   DNA
<213>   Enterococcus faecium

<400>   932
tgcctataca tgcaagtcga acgcttcttt ttccaccgga gcttgctcca ccggaaaaag       60

aggagtggcg aacgggtgag taacacgtgg gtaacctgcc catcagaaag ggataacact      120

tggaaacagg tgctaatacc gtataacaaa tcaaaaccgc atggttttga tttgaaaggc      180

gctttcgggt gtcgctgatg gatggacccg cggtgcatta gctagttggt gaggtaacgg      240

ctcaccaagg ccacgatgca tag                                             263
```

```
<210>   933
<211>   267
<212>   DNA
<213>   Enterococcus faecalis

<400>   933
ggcgtgccta atacatgcaa gtcgaacgct tctttcctcc cgagtgcttg cactcaattg      60

gaaagaggag tggcggacgg gtgagtaaca cgtgggtaac ctacccatca gagggggata     120

acacttggaa acaggtgcta ataccgcata acagtttatg ccgcatggca taagagtgaa     180

aggcgctttc gggtgtcgct gatggatgga cccgcggtgc attagctagt tggtgaggta     240

acggctcacc aaggcgacga tgcatag                                         267
```

```
<210>   934
<211>   200
<212>   DNA
<213>   Klebsiella pneumoniae

<400>   934
caggcctaac acatgcaagt cgagcggtag cacagagagc ttgctctcgg gtgacgagcg      60

gcggacgggt gagtaatgtc tgggaaactg cctgatggag ggggataact actggaaacg     120

gtagctaata ccgcataatg tcgcaagacc aaagtggggg accttcgggc ctcatgccat     180

cagatgtgcc cagatgggat                                                 200
```

```
<210>   935
<211>   635
<212>   DNA
<213>   Staphylococcus aureus

<400>   935
acacggtcca gactcctacg ggaggcagca gtagggaatc ttccgcaatg ggcgaaagcc      60

tgacggagca acgccgcgtg agtgatgaag gtcttcggat cgtaaaactc tgttattagg     120

gaagaacata tgtgtaagta actgtgcaca tcttgacggt acctaatcag aaagccacgg     180

ctaactacgt gccagcagcc gcggtaatac gtaggtggca agcgttatcc ggaattattg     240

ggcgtaaagc gcgcgtaggc ggttttttaa gtctgatgtg aaagcccacg gctcaaccgt     300

ggagggtcat tggaaactgg aaaacttgag tgcagaagag gaaagtggaa ttccatgtgt     360

agcggtgaaa tgcgcagaga tatggaggaa caccagtggc gaaggcgact ttctggtctg     420

taactgacgc tgatgtgcga aagcgtgggg atcaaacagg attagatacc ctggtagtcc     480
```

```
acgccgtaaa cgatgagtgc taagtgttag ggggtttccg ccccttagtg ctgcagctaa      540

cgcattaagc actccgcctg gggagtacga ccgcaaggtt gaaactcaaa ggaattgacg      600

gggacccgca caagcgtgga gcatgtggtt taatt                                 635


<210>   936
<211>   243
<212>   DNA
<213>   Enterococcus faecalis

<400>   936
gcattagcta gttggtgagg taacggctca ccaaggcgac gatgcatagc cgacctgaga       60

gggtgatcgg ccacactggg actgagacac ggcccagact cctacgggag gcagcagtag      120

ggaatcttcg gcaatggacg aaagtctgac cgagcaacgc cgcgtgagtg aagaaggttt      180

tcggatcgta aaactctgtt gttagagaag aacaaggacg ttagtaactg aacgtcccct      240

gac                                                                     243


<210>   937
<211>   274
<212>   DNA
<213>   Staphylococcus hominis

<400>   937
cgtgcctaat acatgcaagt cgagcgaaca gacgaggagc ttgctccttt gacgttagcg       60

gcggacgggt gagtaacacg taggtaacct acctataaga ctgggataac ttcgggaaac      120

cggagctaat accggataat atttcgaacc gcatggttcg atagtgaaag atggctttgc      180

tatcacttat agatggacct gcgccgtatt agctagttgg taaggtaacg cttaccaag       240

gcaacgatac gtagccgacc tgagagggtg atcg                                  274


<210>   938
<211>   200
<212>   DNA
<213>   Staphylococcus haemolyticus

<400>   938
acacgtgggt aacctaccta taagactggg ataacttcgg gaaaccggag ctaataccgg       60

ataatatttc gaaccgcatg gttcgatagt gaaagatggt tttgctatca cttatagatg      120

gacccgcgcc gtattagcta gttggtaagg taacggctta ccaaggcgac gatacgtagc      180

cgacctgaga gggtgatcgg                                                   200
```

```
<210>    939
<211>    287
<212>    DNA
<213>    Enterococcus faecium

<400>    939
cctttaggtg tattggtagg agagcgttct aagggcgtcg aaggcagatc gtgaggactg        60

ctggagcgct tagaagtgag aatgccggta tgagtagcga aagacaggtg agaatcctgt       120

ccaccgaatg actaaggttt cctggggaag gctcgtccgc ccagggttag tcgggaccta       180

agccgaggcc gacaggcgta ggcgatggat aacaggttga tattcctgta cccgttgttt       240

ttgtttgagc aatggaggga cgcaggaggc taaggaatgc agacgat                      287


<210>    940
<211>    281
<212>    DNA
<213>    Proteus mirabilis

<400>    940
caggcctaac acatgcaagt cgagcggtaa caggagaaag cttgctttct tgctgacgag        60

cggcggacgg gtgagtaatg tatggggatc tgcccgatag aggggggataa ctactggaaa      120

cggtggctaa taccgcataa tgtctacgga ccaaagcagg ggctcttcgg accttgcact       180

atcggatgaa cccatatggg attagctagt aggtggggta aaggctcacc taggcgacga       240

tctctagctg gtctgagagg atgatcagcc acactgggac t                            281


<210>    941
<211>    200
<212>    DNA
<213>    Proteus vulgaris

<400>    941
tggttgatca tggctcagat tgaacgctgg cggcaggcct aacacatgca agtcgagcgg        60

taacaggaga aagcttgctt tcttgctgac gagcggcgga cgggtgagta atgtatgggg       120

atctgcccga tagaggggga taactactgg aaacggtggc taataccgca tgacgtctac       180

ggaccaaagc aggggctctt                                                     200


<210>    942
<211>    309
<212>    DNA
<213>    Staphylococcus aureus

<400>    942
tctctgatgt tagcggcgga cgggtgagta acacgtggat aacctaccta taagactggg        60
```

```
ataacttcgg gaaaccggag ctaataccgg ataatatttt gaaccgcatg gttcaaaagt    120

gaaagacggt cttgctgtca cttatagatg gatccgcgct gcattagcta gttggtaagg    180

taacggctta ccaaggcaac gatgcatagc cgacctgaga gggtgatcgg ccacactgga    240

actgagacac ggtccagact cctacgggag gcagcagtag ggaatcttcc gcaatgggcg    300

aaagcctga                                                           309
```

```
<210>    943
<211>    183
<212>    DNA
<213>    Klebsiella oxytoca

<400>    943
ctaacacatg caagtcgaac ggtagcacag agagcttgct ctcgggtgac gagtggcgga     60

cgggtgagta atgtctggga aactgcccga tggagggggga taactactgg aaacggtagc    120

taataccgca taacgtcgca agaccaaaga ggggggacctt cgggcctctt gccatcggat    180

gtg                                                                  183
```

```
<210>    944
<211>    548
<212>    DNA
<213>    Mus musculus

<400>    944
ataggtcggc ggttcatgcc ccccatgcag gagctattac acatgtactt gtagtggatg     60

gtggtatact cagagccggc ctgggggaag acacaggatc caggtgaagt cgctccctac    120

ctcactacag gtgacctgca gcagccggga atggctggct atagcctcta ataagtttca    180

gttttagttg tagagtaggg atattccacc tgttcggcac acctgctgga gctgtggggc    240

ccaacacttg cttagcatgg gagggaaccg gactcagcgt ctctatttcc cgcctggatg    300

gggaagcccc ttctcccaga gactgctgtt aaagtagacc ctgggctggg cacggcagct    360

tgcacctcta agcctagcta gcactcagga gggtgaggca aacgggttgc tagaaagtca    420

acatcagtct aggctggagt caactgtctc taagacgcac aaaccaaaac aaaattacag    480

acctcgggtg gctcataagg taccaccacg ctgtggcgaa aagtctgcct gtcttccaga    540

tactcggg                                                            548
```

```
<210>    945
<211>    577
```

```
<212>   DNA
<213>   Dictyostelium discoideum

<400>   945
attggagaag gtgcagcagg agaagtattt gtagcaacat catcaaagaa caataagaga        60

gttgcaatta aaaagattga aattaacaat gataatgcca aactcttggt aacagagatt       120

gcaattatga agacatcaca tcatgataac attgtaaatt acattgatag ttatatagtg       180

aacgatagag aactttgggt tgcaatggag tttatgggtg gtggttgttt aacagacatt       240

ttagaggcat ttgataatat caaaatgagt gagattcaaa ttgcttatgt ggttaaagag       300

accttgaagg cattgcaata cattcatagt cttcatcgta ttcatagaga tataaagagt       360

gataatattt tattgggctc agagggtagt gtaaagattg ctgattttgg ttatgccgct       420

caattaactc aaaaacaaca aaaacgtaat accgtcgttg gtacccctta ttggatggcc       480

ccagaactca ttagaggtca cgattatggt gtcaaggttg atatttggtc tttgggtatc       540

atgatgatgg aaatggctga aggtgaacca ccttata                               577


<210>   946
<211>   963
<212>   DNA
<213>   Mus musculus

<400>   946
ggaagccaca ctgctacaca gggttgtcaa acgactttga ccttccccaa gatgtgaggg        60

catagtaact ataacatcag gttcctggaa aatttagctg aaagacagaa gcaagcactg       120

aacatggccc cgagatctac gtaccgggta cccattgaga ggctggaaat acaggctggt       180

gtctgtaatg cacacatgcc cagggttcgt cactagaggt gttaccatct ctgctttgca       240

ctccatgtgc agcttttcag aaacactttg gaacctgcaa agatgtttcc agcaaaagta       300

agaaaagtta ggaaccaatc cactgcctcg gcttaacctc agtgtgagtg agcttgctta       360

cctgccgaaa cactacagtc atcaagtggc tgcttaaata aggttgacat gctttcaaat       420

ggcacaatgg aggcctggct tgtttattaa ttgaagagct tacatatcac agaaacaaat       480

gtctcctaac tgatcagtcc tgaagctctt tctccatcat gtgacttcct acttttatat       540

tgttaagacc gactttttaga gcctacataa agagcagcgg tgctacgttt tatgccagca       600

ctaggaggaa gctgagacag gagcttgggc cacagagaaa gaccctaccc ttagcacact       660

tcctttatca gggttagaac acataattac aattgctttt aggtcagttt catttctcca       720

tataaaacca ctcaaagatg ccttttctac tcctaaaatg cttaactaaa aaataactcc       780
```

```
atttctgatt tgtgaattta aaaagtagtg tggaaacaac taaattatca atattcttgg     840

atgattactt tgttaaataa ctggattaac agtaaatctc agggtctaga agtgcagctc     900

ggtgctagag cagcgctgat catgctggag cctggctcag tcctggcacc gagataacta     960

agg                                                                    963


<210>  947
<211>  538
<212>  DNA
<213>  Dictyostelium discoideum

<400>  947
ccaccggttt aacttggaat ccaaaaggtg gagatgctaa atctgctaca ccagcaccag      60

cttcatcagc accagccgcc ccagttgcac cagctgtttc atccactcca gttgaatcaa     120

agaaaggtcc aggtttaggt gcagttttcg gtgaacttag caaaggtgat ggtgttacca     180

gtggtttaaa aaaagttacc aacgatatga atccaaaaa tttcaccgac aaatcatcag      240

ttgttaaagc tgctgatact aaagtcgcca aagttgatgc tccatctaga ccagccgttt     300

ttgctctcca aggtaacaaa tggtccattg aatatcaagt taacaacaaa gaaattgtca     360

ttgccgagcc agatagtcgt caaactgttt acattttcca atgtgtaaac tctttagttc     420

aaatcaaagg taaagttaat gcaattactc ttgatggttg taaaaagact tcaatcgttt     480

tcgaaaatgc catttcctct tgtgaagttg tcaattgtaa tggtgttgaa atccaagt      538


<210>  948
<211>  26
<212>  DNA
<213>  synthetic construct

<400>  948
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aagctctgtt gttagagaag aatgatggtg ggagtggaaa atccaccatg tgacggtaac   180

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tatgttgata accaatatga tttaacaaaa aatgtaggta caaacgcttc cgttgaaatt   180

gatggaaacc gttttaatgg tggtgctaac ggagtgagca ttgccggtaa tttaaaatat   240

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caataacttt tttggtccga tctcttataa ccataataat atttatggag tccgtatcat   420

tgataccgca gggaagcccc ctgtctggct cttgattgaa atggataatc aaccacttga   480

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ccaagcactt ttgtgaaaaa aaacagggaa gtattgtcac tattagctca aatagtgcac     240

gtatgccacg tatgcagctc ggcatgtatg caacgagtaa agcggcactg agtcattact     300

gccgtaatct tgcacttgaa atcgcacctc atcaagtcag actcaatatc gtttcgccag     360

gttctacttt aacgcaaatg caacaacagc tttggacaga caattcgcct ccacctgctg     420

ttattgatgg cgacttaaac cagtaccgca ctggcattcc acttagaaaa cttgcccagc     480

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aagaactgat taaaaccgca cgtaaattta atattccagt ggtttatact gcacagcccg     240

gtaatcagac gcctgaacac cgtcaactat tgaccgattt ttggggaacc gggttaaaag     300

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caatggaatg ctaaactgac ttacaactat cttgatacga agcataatag ccgtcttctc      120

tattactatg gttatccaaa atctgatggg tccggtgttt ctctaacgcc ttggggtgga      180

caagaacatc aagaaaaaca tgctgtagat tttaatctcg aagggaccta taagctattt      240

aaccgagaac atgaagcaac tctaggctac agctatgtac gtaatcatca acaagataaa      300

caatctacag gaacgattaa cgatagtaac gttataaagt caactactac cgattgggca      360

agttggacac cgcaatctat aacttggtca gatttcacag aagcggccaa ctataaacaa      420

aatattaact caatttatgc cgcgacacgt ttacatctta atgaagattt aaaactttta      480

cttggtgcaa actatgttca                                                  500
```

```
<210>    2848
<211>    561
<212>    DNA
<213>    Acinetobacter baumannii

<400>    2848
tgtatctcga tttggttgtg aaccaatatt cggtccagca agttgtgcca gtgattgtga       60

aaaatgatga gtacttcata caaaaaaaga agctgattga tgaattagaa attaacatcc      120

ctcaagagtt attaacaaac actgacacat ctttatcgaa tcaagatgtt ttgaccttgg      180

ggtttagtgg tgatgcgagt gattggatat ctttagataa attaaaagat gtaagctatg      240

aatatcaatc ttcgaaccaa tactttaagc tcaattttcc gcccgcttgg atgcccactc      300

aagttttggg taaagactca tggtataagc cggaagtcgc tcagtctggt atagggctgc      360

tcaataacta tgattttat acatatagac cctatcaagg cggttcaacc agtagtttat      420

ttactgagca gcgttttttc tctccgttag gggtcattaa aaactctggt gtctatgtca      480

aaaaccaata caaaaatgaa ggtaacgccg agtctgtaga taatgacggc tatcgtcgtt      540

atgacacatc ttggcagttt g                                                561
```

```
<210>    2849
<211>    501
<212>    DNA
<213>    Acinetobacter baumannii

<400>    2849
tcacttgtta cacctgtgat ggcacaagca acttttctaa tttggccgat ttatccaaaa       60

attgaagcca atgaaaaggc aactgcggtt tggcttcaaa atacgggtaa gaccgatgcg      120

atggtgcaaa ttcgggtatt taaatggaat caagatggct taaaagataa ctatagtgag      180
```

```
caatcagaaa ttataccaag cccgcctgta gctaaaatta aagcaggcga gaagcatatg    240

cttcgcttaa ccaaaagcgt caatttgccg gatggcaaag agcagtcata tcgtctgatt    300

gtagatgagt tgccgatccg actttctgat ggcaacgagc aagatgcttc taaagtaagt    360

ttccaaatgc gttactcaat tccattgttt gcttatggga aaggaattgg cagtggatta    420

accgaagaaa gtcaaaaact taatgcaaaa aatgctttag caaaaccggt tttacagtgg    480

tcagttcgca ataatcaaca a                                              501
```

```
<210>   2850
<211>   501
<212>   DNA
<213>   Acinetobacter baumannii

<400>   2850
attgatcgaa atcaccaaaa tggaggatcc atcatgatcc ttcggcataa taatttatgc    60

aaaagtattt tgctgatttt attgtcgggt ggatgtttaa atattccaaa tactgtgttt    120

gcaggcgatt tgcctccacc accaagagac attaatgaaa ttaatcaact tttaaactg    180

tatctcgatt tggttgtgaa ccaatattcg gtccagcaag ttgtgccagt gattgtgaaa    240

aatgatgagt acttcataca aaaaagaag ctgattgatg aattagaaat taacatccct    300

caagagttat taacaaacac tgacacatct ttatcgaatc aagatgtttt gaccttgggg    360

tttagtggtg atgcgagtga ttggatatct ttagataaat taaagatgt aagctatgaa     420

tatcaatctt cgaaccaata ctttaagctc aattttccgc ccgcttggat gcccactcaa    480

gttttgggta aagactcatg g                                              501
```

```
<210>   2851
<211>   515
<212>   DNA
<213>   Acinetobacter baumannii

<400>   2851
gcactggttg aaactgaact ctggccaaat ttaatcgatc aagccaaatt acagcatgta    60

ccttgtttgc tgcttaatgc tcggttgtca gaaaaatctg caaaaggata tggcaaagtc    120

tcgggtttaa ccgcaggtat gttaaaacag ctggactggg tgttagctca agatagtgca    180

actcgtcagc gttatgttga gcttggttta gacgaacaca aaagtcaggt cgttggtaat    240

attaagtttg atattcatgc gccagaggct tttattaaac aagctgccca attgcatcag    300

caatggtatc tggaaaatcg gcaggttgtg acgattgcca gtacacatgc acccgaagaa    360
```

```
caacaaattt tggaagcact cgcaccttat ttaaattcag atcgtgagtt ggtgtgtatt      420

gtggtgcctc gtcatcctga gcgtttcgat gaagtatttg aaatttgcca aaatttaaat      480

ttaattacgc atcgtagaag tatgggccaa agtat                                515


<210>    2852
<211>    454
<212>    DNA
<213>    Acinetobacter baumannii

<400>    2852
gctatctgtt agtcaattta tatatgcagc agatcctcag ctcaattcaa gttttaaagt       60

acaagctaaa attgaaaatg ctgttcaat agataatatt gagcaaaaca tggattttgg      120

taaatactct gctttatcaa aaaataaagt agtgactaat attattaata gcaaaggttc      180

ttggaatatc cgttgtacgg aaagtttacc tgtaagtgtt tctatagatg gtggtgaaaa      240

ccttcaaaat aatacaagac gtatgaagaa tggttcgtcc actaattatt tatcttacaa      300

gctatataac tctagtagtt tatccaatga atatattgta ggtaataaat atttattgcc      360

tgctacaaca cctacaaacc gtctggcaaa ttttgaaata tatggtgtcg ttgatttaga      420

aaataataat gaaccccata cggccggaat ttat                                 454


<210>    2853
<211>    517
<212>    DNA
<213>    Acinetobacter baumannii

<400>    2853
atatgaaaaa cattcagaaa tcacttcttg cagcattaat agttgctggt tatgcggtaa       60

atactcaagc agctgttact ggtcaggttg acgttaaatt aaatatctca acaggctgta      120

ctgtaggtgg tagtcaaact gaaggaaata tgaacaagtt tggtacttta aattttggta      180

aaacttccgg tacttggaac aacgtattaa cagctgaagt tgcttcagca gcaacaggtg      240

gcaatatttc tgtgacttgt gacggaacag atcctgttga ttttacagtc gcaattgacg      300

gtggtgaacg tacagaccgc actttaaaaa atactgcttc tgctgatgta gttgcatata      360

acgtttatcg tgatgctgca cgtacaaacc tttatgttgt aaaccaacca caacagttca      420

ctacagtaag tggccaagct actgccgtac caattttcgg tgcaattgct ccaaacacag      480

gtacaccaaa agcacaaggc gattataaag atactct                              517


<210>    2854
```

```
<211>   506
<212>   DNA
<213>   Acinetobacter baumannii

<400>   2854
tttaaatgga gggaagatga tattcaatcg tggttcagca tttataattt cttatttttt       60

aatttcttta gtaaatgcgg gtgaaatcgg agctaaatta actagtcaaa ttgaattatt      120

gccttcttgt tctgttaata ataatgttgt agaaaataat gcaacaaatt taaattttgg      180

aactatagat tttggtgaag ctaccacagc ttttaaaggg gttttagaag ctagtttagt      240

taataatggt aattcaggtt ttcagatcga gtgtgctggt atttcaactg taaaaataat      300

atttggagca ggaaataatg atagtaatat tccagcttca ttttcacaaa attattatca      360

tgctttaagt aatggtagag attttattgc ttataacttg ctctatggtt taaataaaca      420

agtcattaaa gcaaatgaag cttttattct taatgatatg aataataaaa agaatatcga      480

tatttttggt caagcaaccc atgatg                                          506


<210>   2855
<211>   542
<212>   DNA
<213>   Acinetobacter baumannii

<400>   2855
gcttccttac gttcctctgc aattcctgtc tctgaccctg cgtccggtct acgcattacc       60

gagatttttt actccttgca gggtgaagca aatgcctctg gcctaccgac tgtatttatt      120

cgtctcacag gttgcccttt acggtgtagt tattgcgaca ccacctattc ttttgaaggt      180

ggcgaacgct tatcacttga gcacattatt gaaacggctg aaaaatatca aacgccttat      240

atttgtgtga ctggcggtga accacttgca caacccaatt gcttaatttt attacaacgt      300

ttatgtgacg ccggttttga tgtttcccta gaaaccagtg gcgctcttga tgtatcaaga      360

gtggatccgc gtgtttcaaa agttctcgac ttaaagaccc caacttctgg tgaagaacat      420

cgtaatctca tcagtaatct tgaccattta acaccgcgtg accaaatcaa atttgtgatt      480

tgtaatcgtg aagactatga atggtcaaaa caacaagttg aacaatatca actgcaaacc      540

aa                                                                    542


<210>   2856
<211>   540
<212>   DNA
<213>   Acinetobacter baumannii
```

```
<400>  2856
taggtaatgc tggtgttggt gctttctggc gcttaaacga tgctctatct cttcgtacag      60

aagctcgtgg taacttatac tttgacgaaa aattctggaa ctatacagct cttgctggct     120

taaacgtagt tcttggtggt cacttgaagc ctgctgctcc tgtagtagaa gttgctccag     180

ttgaaccaac tccagttgct ccacaaccac aagagttaac tgaagacctt aacatggaac     240

ttcgtgtgtt ctttgatact aacaaatcaa acatcaaaga ccaatacaag ccagaaatcg     300

ctaaagttgc tgaaaaatta tctgaatacc ctaacgctac tgcacgtatc gaaggtcaca     360

cagataacac tggtccacgt aagttgaacg aacgtttatc tttagctcgt gctaactctg     420

ttaaatcagc tcttgtaaac gaatacaacg ttgacgcttc tcgtttgtct actcaaggtt     480

tcgcttggga tcaaccgatt gctgacaaca aaactaaaga aggtcgtgct atgaaccgtc     540
```

```
<210>  2857
<211>  584
<212>  DNA
<213>  Acinetobacter baumannii
```

```
<400>  2857
tcgtgtgtta ttgcttgatg aaccatttgg tgcactagat gctaaggttc gtaaagaatt      60

acgccgctgg ttacgtaact tgcatgatga gctgcatatc acttcaattt tcgtaaccca     120

tgaccaagaa gaggcacttg aagtagccga ccaaattatt gtgatgaata aaggtaacgt     180

cgaacaaatt ggttctccgc gtgaagttta cgaaaaacct gcaacaccat ttgtatttga     240

tttcttgggt caagcaaatc gttttgaagg tgaacatgca agcggtatta tccgtattgg     300

caatgatcgt atcgaattac cgaccacagt tcaggctccg caaggaaaag taattgcttt     360

tgcccgtcct gatgagttac atattcatgc gcaaccacag gcaaatacaa ttgaagcaac     420

ttttgtacgt gaagtctgga ttgctggaaa agtagtggcg gaattacaag atcgtaatgg     480

acgtttaatt gagattgctc tgagcagtga agctgcaaaa caacatgcat ttaaaccaaa     540

tcaaactgtt tgggtaagtg catctcaact tcacctattt gcag                      584
```

```
<210>  2858
<211>  427
<212>  DNA
<213>  Acinetobacter baumannii
```

```
<400>  2858
atgcctattt ccaatcaaga tttgcgcaaa gctggactta agttaccct tccacgaatt       60

aagattttgg aattattaga aaattcaaaa caacatcatc ttagcgccga agatatttac      120
```

```
aagactttgt tagagcaagg ggaagatgtc ggacttgcga cagtttaccg tgtgttaaca        180

caatttgaag ctgcgggtat tattcaacgt catcattttg aaaataacca ttctgttttc        240

gaaatcatgc aagaagatca tcacgatcac ttagtatgcc aaaactgtaa caaagtcatt        300

gaatttacta atgatgttat cgagaaagaa cagcattctg tagcagaaca acatgggttt        360

accttaacgg gtcactcatt aaatctctat ggttactgta atgaacctga atgtcaggaa        420

gcattgc                                                                   427
```

```
<210>  2859
<211>  355
<212>  DNA
<213>  Acinetobacter baumannii

<400>  2859
agatggatgt tgatgctctt gaaaaaacaa tggcgcatct tcaagctgaa ggtaaagttg         60

ttgcttgtgt cgttgcgaca gcgggtacaa ctgatgctgg tgcaattcat ccattgaaaa        120

aaatccgtga aattactaat aagtatggtt catggatgca tatcgatgct gcgtggggcg        180

gtgcactgat cttgtcaaat acctatcgtg caatgcttga tggtattgag ctgtctgatt        240

cgatcactct cgacttccat aagcattatt tccaaagcat cagctgtggc gcgttcttgt        300

taaaagatga agcgaactat cgtttcatgc attatgaagc tgagtacttg aactc            355
```

```
<210>  2860
<211>  564
<212>  DNA
<213>  Acinetobacter baumannii

<400>  2860
gatgaatacc gcccattacg tttgcaaaat ggtttatatg tgcaacgtta tgcaccaatg         60

ctacgtattg ctgtgccgta tggcttaatg aactcaaaac aattacgtaa aattgctgaa        120

gtatcaactc aatatgaccg tggctatgca cacgtatcta cgcgtcaaaa tattcagcta        180

aactggcctg cacttgaaga tgtgccagaa attttagctg aactcgcaac tgtacaaatg        240

catgccattc aaaccagtgg taactgtatt cgtaacacga ctactgacca gtatgcaggt        300

gtagttgctg gtgaaattgc tgatccacgc ccaacatgtg aattgattcg tcagtggagt        360

acattccacc cggaatttgc attcttacca cgtaaattta aaattgccgt ttctgcactt        420

gaagaaaaag accgtgcagc aacagcattc catgatattg gtgtgtatat cgtgcgtaat        480

gaagcaggcg agatgggcta caaaatcatg gtgggtggtg gtttaggccg tactccgatt        540
```

```
attggtagtg tcattcgtga gttt                                      564


<210>   2861
<211>   310
<212>   DNA
<213>   Acinetobacter baumannii

<400>   2861
tttaaagttc ctacggctaa actcttacca gacttaccaa gttttacggg cggcttggtg    60

ggttatttgg gctacgatgc tgtccgctac atcgagccac gtttaaagaa tgtacctgcg   120

gctgatccga ttacgctgcc agatttatgg ttgatgctct caaagacagt cattgttttt   180

gacaatctta aagatacgct atttttaatt gtgcatgcgg atacagagca gagtaatgct   240

tatgaagacg ctcaacaaaa attagatcaa ttagaacagt tgttggcgac tccagttagt   300

ttgcaagcgc                                                          310


<210>   2862
<211>   530
<212>   DNA
<213>   Acinetobacter baumannii

<400>   2862
ttaaacgtct tgccgatgac tttaataaag tggacgaagg tactttaacg attgcaacaa    60

cacatactca agcacgttat gtattaccac caatcgtcaa tcaatttaag aaactatttc   120

caaaagttca tttgattttg caacaagcaa gccctgtcga aattgcagaa atgcttttac   180

aaggtgaagc tgatattggc atcgcgacag agtctttaac aactgaagaa aatttagcaa   240

gcattccata ctatcaatgg cagcacagca ttattactcc tcaagatcac ccacttacac   300

agctcgataa aattgatctt gatgctttat ctgaataccc actaattact tatcacggcg   360

gttttacagg tcgttcaaag atcgataaag catttgaaga tgcacaaatt gatgccgata   420

ttgtaatgtc tgctcttgat gccgatgtta tcaaaactta cgttgaactc ggcatgggtg   480

tcggaattgt caatgatgtc gcttacgatg cagagcgtga ctatcgttta               530


<210>   2863
<211>   534
<212>   DNA
<213>   Acinetobacter baumannii

<400>   2863
cgacgcttta tctcttcgta ctgaagctcg tgctacttat aatgctgatg aagagttctg    60
```

```
gaactataca gctcttgctg gcttaaacgt agttcttggt ggtcacttga agcctgctgc      120

tcctgtagta gaagttgctc cagttgaacc aactccagtt gctccacaac cacaagagtt      180

aactgaagac cttaacatgg aacttcgtgt gttctttgat actaacaaat caaacatcaa      240

agaccaatac aagccagaaa ttgctaaagt tgctgaaaaa ttatctgaat accctaacgc      300

tactgcacgt atcgaaggtc acacagataa cactggtcca cgtaagttga cgaacgttt      360

atctttagct cgtgctaact ctgttaaatc agctcttgta aacgaataca cgttgatgc      420

ttctcgtttg tctactcaag gtttcgcttg ggatcaaccg attgctgaca caaaactaa      480

agaaggtcgt gctatgaacc gtcgtgtatt cgcgacaatc actggtagcc gtac           534
```

```
<210>   2864
<211>   336
<212>   DNA
<213>   Enterobacter cloacae

<400>   2864
ccgacacttg ctgacgtaca ggaacagtac ttgccaagcg ttttagcgca agagtccgtc       60

actccataca ttgcaatgct gaatggagag ccgattgggt atgcccagtc gtacgttgct      120

cttggaagcg gggacggatg gtgggaagaa gaaaccgatc caggagtacg cggaatagac      180

cagtcactgg cgaatgcatc acaactgggc aaaggcttgg gaaccaagct ggttcgagct      240

ctggttgagt tgctgttcaa tgatcccgag gtcaccaaga tccaaacgga cccgtcgccg      300

agcaacttgc gagcgatccg atgctacgag aaagcg                                336
```

```
<210>   2865
<211>   527
<212>   DNA
<213>   Acinetobacter baumannii

<400>   2865
gtgaaggcat gagtgttatt cgggccatga atggaaagca agcgattgaa ttgcacgcta       60

gccaacccat cgatttaatc ttacttgata ttaaattacc cgaattaaac ggctgggaag      120

tattaaataa aatacgccaa aaagctcaga ctcccgtgat catgttgacg gcgctagatc      180

aagatattga taaagttatg gcattacgca taggtgcaga tgactttgtg gtgaagcctt      240

ttaacccaaa tgaagtcatc gctagagttc aggcagtctt aagaagaact cagtttgcaa      300

acaaagcaac taataagaat aaaatctata aaaatattga aattgatacc gacactcata      360

gcgtttatat acactctgag aataagaaaa tcttgcttaa tctgacgctg actgaatata      420
```

```
aaattatttc attcatgatt gaccaacctc ataaagtttt tacgcgcgga gaacttatga      480

accactgcat gaatgatagc gatgcactag agcgaaccgt agatagc                   527
```

```
<210>   2866
<211>   588
<212>   DNA
<213>   Acinetobacter baumannii

<400>   2866
tcagtgtatt aagcattcaa ccgcaatcgg taaattttag tgaaaatctt cctgcacgtg       60

tacatgcatt ccgtacggcg gaaatccgtc cgcaagtcgg aggtatcatt gaaaaggttc      120

tatttaaaca aggtagtgaa gttagagcag ggcaagcctt atataaaatt aattccgaga      180

cttttgaggc cgatgtaaat agcaatagag cttctctcaa taaagctgaa gctgaggtgg      240

caagactcaa agttcagtta gaacgttatg agcagttatt accaagtaat gcaattagta      300

agcaagaagt aagtaatgct caagctcagt atcgtcaggc tctagccgat gtcgctcaaa      360

tgaaagcatt gctggccaga caaaacttga atctgcaata tgcaacagtt cgagcgccta      420

tttctgggcg tattgggcaa tcttttgtca ctgaaggtgc attggtcggt cagggcgata      480

ccaatacgat ggcaaccatt caacagattg ataaagtcta tgttgatgta aagcaatcgg      540

ttagtgagta tgaacgccta caggctgcgc tacaaagcgg cgaattat                  588
```

```
<210>   2867
<211>   567
<212>   DNA
<213>   Enterobacter cloacae

<400>   2867
atcgtgacca acagcaacga ttccgtcaca ctgcgcctca tgactgagca tgaccttgcg       60

atgctctatg agtggctaaa tcgatctcat atcgtcgagt ggtggggcgg agaagaagca      120

cgcccgacac ttgctgacgt acaggaacag tacttgccaa gcgttttagc gcaagagtcc      180

gtcactccat acattgcaat gctgaatgga gagccgattg ggtatgccca gtcgtacgtt      240

gctcttggaa gcggggacgg atggtgggaa gaagaaaccg atccaggagt acgcggaata      300

gaccagtcac tggcgaatgc atcacaactg ggcaaaggct tgggaaccaa gctggttcga      360

gctctggttg agttgctgtt caatgatccc gaggtcacca agatccaaac ggacccgtcg      420

ccgagcaact tgcgagcgat ccgatgctac gagaaagcgg ggtttgagag gcaaggtacc      480

gtaaccaccc cagatggtcc agccgtgtac atggttcaaa cacgccaggc attcgagcga      540
```

```
acacgcagtg atgcctaacc cttccat                                      567
```

```
<210>   2868
<211>   588
<212>   DNA
<213>   Acinetobacter baumannii

<400>   2868
tcagtgtatt aagcattcaa ccgcaatcgg taaattttag tgaaaatctt cctgcacgtg    60

tacatgcatt ccgtacggcg gaaatccgtc cgcaagtcgg aggtatcatt gaaaaggttc   120

tatttaaaca aggtagtgaa gttagagcag ggcaagcctt atataaaatt aattccgaga   180

cttttgaggc cgatgtaaat agcaatagag cttctctcaa taaagctgaa gctgaggtgg   240

caagactcaa agttcagtta gaacgttatg agcagttatt accaagtaat gcaattagta   300

agcaagaagt aagtaatgct caagctcagt atcgtcaggc tctagccgat gtcgctcaaa   360

tgaaagcatt gctggccaga caaaacttga atctgcaata tgcaacagtt cgagcgccta   420

tttctgggcg tattgggcaa tcttttgtca ctgaaggtgc attggtcggt cagggcgata   480

ccaatacgat ggcaaccatt caacagattg ataaagtcta tgttgatgta aagcaatcgg   540

ttagtgagta tgaacgccta caggctgcgc tacaaagcgg cgaattat               588
```

```
<210>   2869
<211>   588
<212>   DNA
<213>   Acinetobacter baumannii

<400>   2869
tcagtgtatt aagcattcaa ccgcaatcgg taaattttag tgaaaatctt cctgcacgtg    60

tacatgcatt ccgtacggcg gaaatccgtc cgcaagtcgg aggtatcatt gaaaaggttc   120

tatttaaaca aggtagtgaa gttagagcag ggcaagcctt atataaaatt aattccgaga   180

cttttgaggc cgatgtaaat agcaatagag cttctctcaa taaagctgaa gctgaggtgg   240

caagactcaa agttcagtta gaacgttatg agcagttatt accaagtaat gcaattagta   300

agcaagaagt aagtaatgct caagctcagt atcgtcaggc tctagccgat gtcgctcaaa   360

tgaaagcatt gctggccaga caaaacttga atctgcaata tgcaacagtt cgagcgccta   420

tttctgggcg tattgggcaa tcttttgtca ctgaaggtgc attggtcggt cagggcgata   480

ccaatacgat ggcaaccatt caacagattg ataaagtcta tgttgatgta aagcaatcgg   540

ttagtgagta tgaacgccta caggctgcgc tacaaagcgg cgaattat               588
```

```
<210>  2870
<211>  718
<212>  DNA
<213>  Acinetobacter baumannii

<400>  2870
tgccaattaa cttcttagcc gaagcagcaa aaaaaattag tcacggcgac ctctctgcta      60

gagcttacga taatagaatt cactccgccg aaatgtcgga gcttttatat aattttaatg     120

atatggctca aaagctagag gtttccgtca aaaatgcgca ggtttggaat gcagccatcg     180

cacatgagtt aagaacgcct ataacgatat tacaaggtcg tttacaggga attattgatg     240

gcgtttttaa acctgatgaa gtcctattta aaagtctttt aaatcaaatt gaaggtttat     300

ctcacttagt cgaagactta cggactttaa gcttagtaga gaaccagcaa ctccggttaa     360

attatgaatt gtttgacttt aaggcggtag ttgaaaaagt tcttaaagca tttgaagatc     420

gtttggatca agctaagcta gtaccagaac ttgacctaac gtccactcct gtatattgcg     480

accgccgtcg tattgagcaa gttttaattg ctttaattga taatgcgatt cgctattcaa     540

atgcaggcaa acttaaaatc tcttcagaag tggttgcaga caactggata ttaaaaattg     600

aggatgaagg ccccggcatt gcaaccgagt tccaagacga tttatttaag cctttctta      660

gattagaaga atcaaggaat aaagaatttg gcggcacagg tttaggtctt gctgttgt      718


<210>  2871
<211>  673
<212>  DNA
<213>  Stenotrophomonas maltophilia

<400>  2871
attcctgcag ttcagtggtg ccgccgttgc gtcctcgctg tttgccccgg cgctggtgca      60

accggtttcc gcctcgtctg gcatacccgc cgcgaacgcc gccattgccg gcgccgccga     120

tttcgccgcg ctggagaaag ccagcggtgg ccgcctgggc gtcaccgtgt tgaacaccgg     180

caacggtcgt cgcatcggcg ggcatcggca ggatgagcgc ttcccgatgt gcagcacgtt     240

caagtcgatg ctggtcgccc atgtgctgag ccttgccgat gcaggccgcg tttcgctcga     300

cacccgtgtg cccatcgccg ggaaggatct gctgtcctac gctccggtgg cgcgccgcca     360

cgtgggcaag gatctgaccg tgcgcgacct gtgccggggc acgctgacca ccagcgacaa     420

cacggcggcc aacctgctgc tggaggtggt gggcgggccg tcggcgctga cggcattcct     480

gcgcgggcag ggcgacagca ttacccgcaa tgaccgcaac gagccggacg tgaatctgtt     540
```

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cgcgaaggga gacccgcgcg ataccaccag cccggccgcg atggccacca gcctggcccg      600

cttcgcggtg ggcaatggcc tgcagcctgc atcgcgccgg cagttcgccg attggctcat      660

cgacaaccag acc                                                          673


<210>    2872
<211>    584
<212>    DNA
<213>    Enterobacter cloacae

<400>    2872
cagccacact actttacctt cggtaaagcc gatgttgcgg cgaacaaacc cgtcaccccg       60

caaaccctgt ttgagctggg ctctataagt aaaaccttca ccggcgtact gggcggcgat      120

gccattgccc ggggtgaaat agcgctgggc gatccggtag caaaatactg gcctgagctc      180

acgggcaagc agtggcaggg cattcgcatg ctggatctgg caacctatac cgcaggcggt      240

ctgccgttac aggtgccgga tgaggtcacg gataccgcct ctctgctgcg cttttatcaa      300

aactggcagc cgcagtggaa gccgggcacc acgcgtcttt acgctaacgc cagcatcggt      360

cttttggtg cgctggcggt caaaccttcc ggcatgagct atgagcaggc catgacgacg       420

cgggtcttta aacccctcaa gctggaccat acctggatta acgtcccgaa agcggaagag      480

gcgcattacg cctggggata ccgtgagggt aaagcggtcc acgtttcgcc agggatgctg      540

gacgcggaag cctatggcgt aaaaactaac gtgaaggata tggc                       584


<210>    2873
<211>    556
<212>    DNA
<213>    Enterobacter cloacae

<400>    2873
cattagccag catgtgaaaa cgctggagca gcacctgaac tgtcagctgt tcgttcgcgt       60

gtcgcgcggg ctgatgttga ctatcgaggg tgaaaattta ctgccggtgt tgaatgattc      120

tttcgatcgt atagccggaa tgctggatcg cttcgctaac catcgtgcgc aggagaagct      180

gaaaatcggc gtggtgggta catttgccac cggggtttta ttctcgcagc tggaggattt      240

tcgccgtggc tatccgcaca tcgatcttca gctttccacc cataacaacc gcgttgatcc      300

ggctgccgaa gggcttgact atacgatccg ctacggtggc ggggcgtggc acggcaccga      360

ggctgaattc ctttgtcatg cgccgctcgc gccgctgtgt acgcccgata tcgccgccag      420

tctgcacagt ccggccgaca tcctcaggtt tacgctgctg cgctcttacc gacgcgatga      480
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atggaccgcg tggatgcagg cggccggcga gcatcccccct tcgccaacgc accgcgtgat   540

ggtatttgat tcgtcc   556

<210> 2874
<211> 597
<212> DNA
<213> Enterobacter cloacae

<400> 2874
gcatctcttg ctctgctctc gccacgccag tgtcagaaaa acagctggcg gaggtggtag   60

cgaatacggt taccccgctg atgaaagccc agtctgttcc aggcatggcg gtggccgtta   120

tttatcaggg aaaaccgcac tattacacgt ttggcaaggc cgatatcgcg gcgaataaac   180

ccgttacgcc tcagaccctg ttcgagctgg gttctataag taaaaccttc accggcgtgt   240

taggtgggga tgccattgct cgcggtgaaa tttcgctgga cgatccggtg accagatact   300

ggccacagct gacgggcaag cagtggcagg gtattcgtat gctggatctc gccacctaca   360

ccgctggcgg cctgccgcta caggtaccgg atgaggtcac ggataacgcc tccctgctgc   420

gcttttatca aaactggcag ccgcagtgga gcctggcac aacgcgtctt tacgccaacg   480

ccagcatcgg tcttttttggt gcgctggcgg tcaaaccttc tggcatgccc tatgagcagg   540

ccatgacgac gcgggtcctt aagccgctca agctggacca tacctggatt aacgtgc   597

<210> 2875
<211> 596
<212> DNA
<213> Stenotrophomonas maltophilia

<400> 2875
ccacctcatc agcaacatga aggtgcgcgg cgtggcgccg caggacctgc ggctgatcct   60

gctcagccac gcgcacgccg accatgccgg gccggtggcg gagctgaagc gccgtacggg   120

cgccaaagta gcggccaacg ccgaatcggc ggtgctgctg gcgcgcggtg gcagcgacga   180

tctgcacttc ggcgatggca tcacctaccc gcctgccagt gcagaccgca tcgtcatgga   240

tggcgaaatg atcacggtgg gcggcatcgc gttcactgcg cacttcatgc cggggcacac   300

cccgggcagc accgcgtgga cctggaccga tacccgcgag ggcaagccgg tgcgcatcgc   360

ctacgccgac agcctgagtg caccgggcta ccagctgcag ggcaacccc gttatccgca   420

cctgatcgag gattacaggc acagcttagc gacggtgcgg gcgctgccct cgacgtgtt   480

gctgacaccg catccgggtg ccagcaactg ggactacgct gccggcagca aggccagcgc   540

```
caaggcactg acctgcaagg cctacgcgga tgcggccgaa cagaagttcg acgcac          596


<210>  2876
<211>  181
<212>  DNA
<213>  Enterobacter cloacae

<400>  2876
aaaacggttc accataaaaa acatcacaaa gcggctaaac cagcggcaga acagaaagcg          60

caggccgcga aaaagcacca taaaaaagcg gcaaaacctg cggtagagca gaaagcccag         120

gcggctaaaa agcatcacaa aaaagcagca aaacacgaag cggctaaacc tgctgcacag         180

c                                                                        181


<210>  2877
<211>  310
<212>  DNA
<213>  Enterobacter cloacae

<400>  2877
ttgccgatta tcagatcgtg accgatctga atgccgaatg cgatcgggcg atactccggg          60

ttgacgttgc gctggaaggc tcacgctacg ccgaatgcga ggtggcgttt accctgtggc         120

gtaatggcga agcctgcgcg caaaccacgc agcagcccgg atcggccatc gtggacgaac         180

gcggcagttg ggctgaacgg cttacggtgg cgatacccgt gaacgctccc gcgctgtgga         240

gcgctgaaac accggaatgc tatcggctga caatgtcgct tcgggatgcg cagggtaacg         300

tgctggagac                                                               310


<210>  2878
<211>  260
<212>  DNA
<213>  Enterobacter cloacae

<400>  2878
ggtctacacc acggatcaca ccgacgttgc cgcctggggc gacgtgctga cccgttttat          60

cattgccgat aaccccactc tggcactgaa ggctgtcgat gcccctgcgc attccgacgg         120

tgctgatgca ggctcggtgg agaaagagtg cgcgccatg accgatgtgc atcagttctt          180

tagcttactg aagcgccata acctgagccg ccagcaggcg tttcgtctgg tgagtgacga         240

tctggcctgt aaagtggata                                                    260


<210>  2879
<211>  294
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<212>   DNA
<213>   Enterobacter cloacae

<400>   2879
ttctcgacga acccacttca gcgctggatc tctaccacca gcagcatctg ctgcgcctgt      60

tgaaatcgct gacccgtcag ggccatcttc acgcctgcgt ggtgctgcac gatctcaatc     120

ttgccgcatt atggtcggac cggatcctgc tgttacacaa cggcaggatt gtttctcagg     180

gcataccgga gacggttttg caggccgacg cgctggcaca ctggtacggt gcgcaggtgc     240

acgttggcat gacatccggc gcacgccgca ccgcaggttt ttctcgcccc ttag           294


<210>   2880
<211>   153
<212>   DNA
<213>   Enterobacter cloacae

<400>   2880
cgtcggtttg tctttctgac ggccgaaggt gaggccctgc ttgagagcag taaaccgatt      60

ggaaatgagg tggatgaggc gttttttaggg cgccttaacg gcgcggaacg agagcaattt    120

tcagcgctca ttaaaaagat gatgcaggat taa                                  153


<210>   2881
<211>   353
<212>   DNA
<213>   Enterobacter cloacae

<400>   2881
gacccattac gaacaagaga tcctcgacat tcacgtcgcc cttgaaaact ggttaggtgc      60

aggcgaaggc gatcgggaca ccctgctcgc ccgtttccgt ccggattttc tgatggttcc     120

accgagtggc aacccttta g atcatcacgc gcttgcccaa attttttatat tgcacagcgg   180

gggaacccga cccgggctca ggatcgacat tgatgcgttg acaacgcttc agacatggga     240

caacggcgcg gtgctccatt accgggagac gcaaacccgg ccaggccagc ccgtcaacgt     300

gcgctggtca accgcagtgc ttaatcagga aggggataac atccacctgg cgt            353


<210>   2882
<211>   517
<212>   DNA
<213>   Enterobacter cloacae

<400>   2882
agtgggtgtg ctttcgtggg tcagcaatga cgcccagctg cgtcagcttt cactctgggg      60

aatgggaagt cttggtcagg cacagtggtc aacgctgctc gccgtgacct cgctgatggt     120
```

```
gcctgccgtt ctggcgatct ggcgttgtgc cagcgcatta aatttactgc aactgggtga    180

agaggaagcg cattaccttg gcgtggacgt tgcctttgta cagcgaatat tactgttatg    240

cagcgccctg ctggtcgctg cggctgtcgc cgtcagcggc gtgattggct ttgtcggact    300

cgtggtgccg cacctgatgc gcatgtggct gggcgccgat caccgggcaa ccctccccgg    360

cacggtactc gctggcgctt tactgctgct ggtggcggat acggtcgcgc gcaccctggt    420

cgctccggca gaaatgccgg tcggcctgct caccagtatc cttggtgctc cctggttctt    480

atggctcatt tttcgtcgtg gagaacagca tggctga                            517
```

```
<210>    2883
<211>    627
<212>    DNA
<213>    Enterobacter cloacae

<400>    2883
gcggagtctt ctctggttgc gcgcgacagt accagccagt ggccgcaggc gacaaacgcg     60

ctgcctgacg tggggtatct tcgccagctg aatgcggagg ggattttgtc cgtacgcccg    120

acgctggtgc tggcaagcga ccaggcgcag ccctctctgg cgctgaaaca ggttgaacag    180

agccacgtcc gggtggttac cgttcccggc acgcctgacc tgcgcgcgat tgacgaaaaa    240

gtacgggtga tagctcaggc gacgcatcat gaggcgcaag gggaaaccct gcgcaactcg    300

ctgcgtcagg cgctggcggc actgccctca acaccgtcaa caagcgggtg ctgtttatcc    360

tcagccacgg cggaatgacc gcaatgggcg gccgggcaac agaccggcgc ggatgcggca    420

atacgcgccg ccgggttgca gaacgccatg cagggcttta cccgctatca gccgctttcc    480

aggaggggt dgatggccagc cagccggatc tggtggtgat ttcgcaggac ggtcttaacg    540

cgctgggcgg cgaagaaaat ctgtggaaac tgcccggcct ggcgcaaacg ccagcgggac    600

gaagcaagca ggtgctggct attgatg                                        627
```

```
<210>    2884
<211>    731
<212>    DNA
<213>    Enterobacter cloacae

<400>    2884
catcaggata aacggcatag atgccctgct gagcgaacgt gtacgccggt aacagcgaga     60

ccagttcccc tgcatccagt gcgtttcgca ccagccactc cggcagcagc gccactccac    120

atcccgcgag ggcaaaagcc atcagcgcct gggcgctgtc tgcatacagg cgcggcgctc    180
```

```
tcttgatctc aaaggaaacc ggctgctcat caacacctct cacctgccag cgcagcggcg     240

aggttaaacg ctcatgaatg atccagtccg cttccgccag ctgctccagc gagttaaccg     300

gatggtttgc cagccagcct ggcgttgcca cgggcaggat ggtgaaggag gtcatcaacg     360

cggcgtggta gcgcgaatct gcaagcgtgc cgagccggat agcgacatcg aagcgctcgg     420

cgataagatc ggcatgcaaa gaggacgaga catgccgcac gcgaaggtcc gggtgcagct     480

ggctaaattc agccagcaaa ggcaccacca cctgcgagcc atattcgggc gtggtggtga     540

tccgcagttc tcccgtcagc ccggcgtggt tggcgcgaac gtcatcctgc aatcgctctg     600

catcccgtaa cagcatcacg cttcgttgat gaaagagctt ccccgcctcg gtcagcgtca     660

ggcgtcgggt ggttcgcagc aacagggtga cgcccagctc ctcttcaagc tgacgaatat     720

gaaagctgac c                                                          731
```

```
<210>   2885
<211>   353
<212>   DNA
<213>   Enterobacter cloacae

<400>   2885
agcagtaacc cgatgaccga tcgttccacc attcagcgcg atgcccagct tggctaccgc      60

attgcgccag ccggaaacga ctggctgaac gccgatgcga aaatttactg gtccgaagcg     120

cggatcaacg cccagaacat cgacgccagc ggcgagttcc gtaagcagac taccaaaggc     180

ggcaaagtgg aaaaccgcac ccgcctgttc agcgactctt tcgcctcgca cctgctgacc     240

tacggcgggg aatactatcg tcaggagcaa caccctggcg gcgcgaccac cggcttcccg     300

gacgcgaaaa tcgacttcag ctccggctgg ttgcaggatg agatcactct gcg            353
```

```
<210>   2886
<211>   461
<212>   DNA
<213>   Enterobacter cloacae

<400>   2886
gccattgtca cctttgcttt ggcctgcgcg tggcttaaaa cagaaccgtc gccgataaac      60

accaccagga cagtaaacct gtctttgctg acggatccgc tgttgcgctt atccatgctt     120

atctatgtgt gcgtacccgg catttttatc ggcgtgaacg taacgggcat gtattacctc     180

cagagcgagg ccaatatgac acccgccgca acgggcatgc ttatgctgcc gtggtctgtg     240

gcttcgtttg tggctatcac cgcgacagga cgctatttca accgtatcgg cccccggccg     300
```

```
ctggtggtca tcggttgcct tttgcaggcg acgggcattc tgctttttagt taacgtcggc    360

ccggcaatgc tgctacctgc cgttgcgttt gcgctgatgg gcgcggggggg aagcctttgc   420

agcagtacgg ctcagagcag cgcgtttttg acgatgcgac c                         461


<210>   2887
<211>   401
<212>   DNA
<213>   Enterococcus faecium

<400>   2887
ttggcaatgc gatgttaggt aatatcatcg ttgtcagcgg ctcatttttg atactactgg     60

ctctcttgaa gcactttgct tggggaccaa tcagcgatat tttgaaaaaa cgtgaagaca    120

agatcgccaa tgatttagat tctgcagaac aatctcgcat caactcagcg aaaatggaac    180

aagaacgcga acaacaattg ttagcctctc gttctgatgc agctgatatc atcaaaaatg    240

cgaaagaaag tggagaatta agccgccaaa atattttgaa ggatgctcaa gaagaagcag    300

ctcgtctaaa aagcaaagcc caagctgata tcactgtaga acgtgattca gcgctgaact    360

ctgtaaaaga cgacgttgca gaactctctc ttcaaatcgc g                        401


<210>   2888
<211>   787
<212>   DNA
<213>   Acinetobacter baumannii

<400>   2888
cggcatcgtc aacataacct cggacagttt ctccgatgga ggccggtatc tggcgccaga     60

cgcagccatt gcgcaggcgc gtaagctgat ggccgagggg gcagatgtga tcgacctcgg    120

tccggcatcc agcaatcccg acgccgcgcc tgtttcgtcc gacacagaaa tcgcgcgtat    180

cgcgccggtg ctggacgcgc tcaaggcaga tggcattccc gtctcgctcg acagttatca    240

acccgcgacg caagcctatg ccttgtcgcg tggtgtggcc tatctcaatg atattcgcgg    300

ttttccagac gctgcgttct atccgcaatt ggcgaaatca tctgccaaac tcgtcgttat    360

gcattcggtg caagacgggc aggcagatcg gcgcgaggca cccgctggcg acatcatgga    420

tcacattgcg gcgttctttg acgcgcgcat cgcggcgctg acgggtgccg gtatcaaacg    480

caaccgcctt gtccttgatc ccggcatggg gtttttttctg ggggctgctc ccgaaacctc    540

gctctcggtg ctggcgcggt cgatgaatt gcggctgcgc ttcgatttgc cggtgcttct    600

gtctgtttcg cgcaaatcct ttctgcgcgc gctcacaggc cgtggtccgg gggatgtcgg    660
```

```
ggccgcgaca ctcgctgcag agcttgccgc cgccgcaggt ggagctgact tcatccgcac        720

acacgagccg cgccccttgc gcgacgggct ggcggtattg gcggcgctga aagaaaccgc        780

aagaatt                                                                  787
```

```
<210>   2889
<211>   632
<212>   DNA
<213>   Stenotrophomonas maltophilia

<400>   2889
tgcagaacga gaaggatgcg gtggactcgg tgttctccgt gcagggcttc agcttcgccg         60

gcatgggcca gaacgcgggc atggcgttcg tcaagctgaa ggactggagc gagcgtgacg        120

ccgacaatgg cgtgatgccg atcaccggac gtgcgatggc ggccctgggc cagatcaagg        180

atgccttcat cttcgccttc ccgccgccgg ccattccgga gctggggacc gcctcgggct        240

acaccttctt cctgaaggac aacagcggcc agggccacga ggcactggtg gccgcgcgca        300

accagctgct cggcctggcc gcaggcagca agaagctggc caacgtacgc ccgaacggcc        360

aggaagacac gccgcagttc cgcatcgaca tcgacgcggc caaggcgacc tcgctgggac        420

tgtcgatcga ccagatcaac ggcacgctgg cggccgcgtg gggcagctcg tacatcgatg        480

acttcgtcga tcgtggccgc gtcaagcgcg tgttcgtgca ggccgaccag gcgttccgca        540

tggtgccgga ggacttcgat ctctggtccg tgaagaacga caagggtgag atggtgccgt        600

tcagcgcctt cgctaccaag cactgggact ac                                     632
```

```
<210>   2890
<211>   526
<212>   DNA
<213>   Stenotrophomonas maltophilia

<400>   2890
aggaacgtac gctggaatcg atcgcggcac tggaaaacca cttcctgcag aacgagaagg         60

atgcagtgga ctcggtgttc tcggtgcagg gcttcagctt cgccggcatg ggccagaacg        120

ccggcatggc gttcgtcaag ctgaaggact ggagcgagcg tgacgccaac aatggcgtga        180

tgccgatcac cggacgcgcg atggcggccc tgggccagat caaggatgcc ttcatcttcg        240

ccttcccgcc gccggccatc ccggaactgg gcaccgcctc gggctatacc ttcttcctga        300

aggacaacag cggccagggc acgaggcac tggtggccgc gcgcaaccag ctgctcggcc        360

tcgccgccgg cagcaagaag ctggccaacg tgcgcccgaa cggccaggag gacacgccgc        420
```

```
agttccgcat cgacatcgac gcggccaagg cgacctcgct ggggctgtcg atcgaccaga      480

tcaacggcac gctggccgcc gcgtggggca gctcgtacat cgacga                     526
```

```
<210>    2891
<211>    473
<212>    DNA
<213>    Stenotrophomonas maltophilia

<400>    2891
caagaagcag aaccttcgca tcaatgtgct tgccgccgcc gtgctgtcga tgaccgcggt       60

gggtgccgtc cacgccgctg gactgccgac ccgcgaaccg gtgcgccagg ccagtgctgc      120

ccagccgggc accgaccgca tcatcgtcaa gtatcgtgcc ggtagcgctg cagccggtga      180

ccgttcggcc aagctgtcca ccgtgcagtc ggcgctgacc cgcgccagcc tggccggcgg      240

taccgcgcgc gccagtacgc tgggcccgca ggtggtacgc cggctgggcg tgggcgcgga      300

tgtgatccgc ctgcagggcc gcctggcacc ggccgaactg cagcgcgtgc tgaaggaact      360

gaaggccgac cctgcggtgc agtacgccga ggccgacgtg aagctgcgcc gcagcgaact      420

gcgcgccggt gacgtgcagc ctgcgctggc gccgaatgat ccgtactacc agc            473
```

```
<210>    2892
<211>    403
<212>    DNA
<213>    Stenotrophomonas maltophilia

<400>    2892
cagcatcctg atggaagacg gcagcacctt cgagcacaag ggcacgctgg agttctctga       60

agtgagcgtc gatccagcca ccggcagctt cggcctgcgc gtgaaggtgg acaacccgga      120

cggcctgctg atgccgggca cctacgtgcg cgcggtgatc ggcggcggcg tgcgcagcga      180

tgcggtgctg gtaccgatgc agggcatcgc ccgcgatccg aagggcgaca ccaccgcgat      240

ggtggtcggc aaggacaaca aggtcgaagt gcgcccggtc aaggtcagcc gcacggtcgg      300

cgacaagtgg ctggtcgagg acggtctgaa ggccggcgac aaggtcatcg tcgaaggcct      360

gcagaagatc ggccccggca tgccggtcaa ggccaccgag aag                        403
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```
<210>    2893
<211>    476
<212>    DNA
<213>    Stenotrophomonas maltophilia

<400>    2893
```

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ctcatcgcca ctttcgacac cacccagggc ccgatcaagg tcgagctgtt cgccgacaag        60

gcgccgctga ccgtggccaa cttcgtgaac ctggtcaagc acggtttcta tgacggcctg       120

atcttccacc gcgtgatcgc cgacttcatg atccagggcg gctgcccgca gggtcgtggc       180

accggcggcc cgggctacaa gttcgaagac gagaagaatg gcgtgaagca cgaggtcggc       240

tcgctgtcga tggccaacgc cggcccgaac accaacggca gccagttctt catcacccac       300

atcaagaccg actggctgga cggccgccac accgtcttcg gcaaggtcct ggaaggccag       360

gccatcgtcg attcggtcaa gcagggcgac gtgatccatt cgatcaccct ggaaggcgac       420

gtcgacgccg tgctggccgc ccaggccgag cgcgtcgcgg agtggaacaa gcacct         476
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<210>    2894
<211>    380
<212>    DNA
<213>    Stenotrophomonas maltophilia

<400>    2894
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accgcgcgca ccagcagcca gatgaagcat gcggtcagcg cgatgtgcag cacatgctgc       120

aggttgccca gcaccggatc ctgcagcggc gtggcctgca atgcggggat caacaacagc       180

agcggccatg cggtggccag cggcaacccg agcacacgtc cgatgcgtgc cgccggcga        240

tcacgccctt tcagtcgatg gtagatccac aggatcaacc acgcgccgat gccgcccact       300

acaacggcca atcccaacgg ccatgcgtag gcctgtgcgc tttgccagtg caccgttgcc       360

acctccactc gaacagcagg                                                   380
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<211>    281
<212>    DNA
<213>    Stenotrophomonas maltophilia

<400>    2895
gacaccgctg ctgaagtacc gcggcatgcc gccactgatc gaacaggccg ccaccgagct        60

gcgccgcgcc ggcgccgtgg tggtaccggt ggagctgccc aaccagggcg cctgggccga       120

ggccgaacgc acgctgctgc tgtacgaatt caaggccggg ctggagcgct acttcaacac       180

ccaccgagcg ccactgcgca gcctggccga cctgatcgcc ttcaaccagg cgcacagcaa       240

acaggaactg ggcctgttcg ccaggaact gctggtggaa g                           281
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```
<210>    2896
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<211>   286
<212>   DNA
<213>   Stenotrophomonas maltophilia

<400>   2896
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gccaacatgc cgaaggcgca ctgccgcaca actcgttcgg ctcgtacgtg ccgtggatca   120

agtttgcctg cgattcgctg atcacccagc cgcgcgccag cgaggccgaa cgtgacgaga   180

tgttccagac ccagtacgcc ctgcagatca tgccgcgact gagtgaagcc caggcccgcg   240

aattcgtcga ccgttgctgg cagcacgtct accagagcag tccggt                  286


<210>   2897
<211>   629
<212>   DNA
<213>   Stenotrophomonas maltophilia

<400>   2897
cgtcaccgag aagaagagcg ccccgccct ggccagcaca cccggctcac gggtggcagc    60

ggtcatgcgc cgcaatgcgg cattggccga ggactatgcg cggcgccacg cgattccgcg   120

ctggtacgcc gacgccgacg cactcatcgc cgatcccgaa gtgaacgcgg tctacgtcgc   180

aacgccgccc tcgacgcaca tgcagtacgc gctgcaggcg atcgccgcgg gcaagccggt   240

ctacatcgaa aagccgatgg ccatggacca cgacgagtgc cagcgcatca tcgcggccag   300

cgcccgcagc ggcgtgcccg ttttcgtggc ctactaccgc cgtgccctgc cccgcttcgc   360

acaggtgaag cagctgctgg acaacggcgc gatcggaacg ccgcgcagcg tgcgcgccac   420

cctgcatcgg ccgcattcgg cgaatgccgc atcgcccgac ttctggcgga ccaatccgtc   480

gatcgccggc ggcgggctgt cgtcgatct gggctcgcat accctggacc tgctcgacca   540

tctgctgggg ccgctgagcg acgtgcgtgg cctggccagt tcgctgaccg gcgcctacgc   600

cgccgaggac agtgtctcga tgtgcttcc                                     629


<210>   2898
<211>   345
<212>   DNA
<213>   Stenotrophomonas maltophilia

<400>   2898
ggtgatgatc cactccttca tcgagctgtc cgaagacgag cgcctgcgca agaccatgga    60

gatcatgctg cgcagcgatg cctcggccga caccagggtg ctgaccgaaa tgcagcaggc   120

cggattccgc gatgcgctgg accggatgga gcgtgccctg cgccgcgccc gcgatctggg   180
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ccagctgcgc gaaggcgccg accccaagat cgccgcgcgc atgctgcatg ccaccgtgct        240

gggcgtgctg cacggggcga tggtcgaacc ggacctgatg gacctcaagc gcgacggcat        300

gctcgcactg gacatgaccc tggccgccta cgtgaaggac ggcgt                        345


<210>   2899
<211>   153
<212>   DNA
<213>   Stenotrophomonas maltophilia

<400>   2899
accgcatggc tgacctacgg tgccgatgcg cagcggctga agatcgccga tgccacgctg         60

aagacctacg aggattcgct gcgcctggcc gaggcccgcc acgaacgtgg tggcagttcg        120

gcgctggagc tgacccagac ccgtaccctg gtc                                     153


<210>   2900
<211>   212
<212>   DNA
<213>   Stenotrophomonas maltophilia

<400>   2900
atgtcccagg taacgcaacc gcgtgtgcgt cgagtgtggg tggtccttgg tgcgtccgtt         60

ctgtcatcgc tgctgctggc cacgcctgcg ctggccggtg acgtccactc agcgggcctg        120

cagtccgcgc cgacgcacca gcgcttcatc gtgaagtacc gcgacggtag tgcgccggtg        180

gccaacacca ccgcactggc ctcttcgctg aa                                      212


<210>   2901
<211>   150
<212>   DNA
<213>   Stenotrophomonas maltophilia

<400>   2901
gtctcgacca aggtacgggt ctgggtcagc tccagcgccg aactgccgcc gcgttcgtgg         60

cgggcctcgg ccaagcgcag cgaatcctcg taggtcttca gcgtggcatc ggcgatcttc        120

agccgctgcg catcagcccc ataggtcagc                                         150


<210>   2902
<211>   534
<212>   DNA
<213>   Staphylococcus aureus

<400>   2902
gctggtaaag ctgaagaaac aacacaacca gttgcacaac cattagttaa aattccacag         60
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ggcacaatta caggtgaaat tgtgaaaggt ccggaatatc caacgatgga aaataaaacg      120

ttacaaggtg aaatcgttca aggtccagat ttcccaacaa tggaacaaag cggtccatct      180

ttaagcgaca attatactca accgacgaca ccgaacccta ttttagaagg tcttgaaggt      240

agctcatcta aacttgaaat aaaaccacaa ggtactgaat caacgttgaa aggtattcaa      300

ggagaatcaa gtgatattga agttaaacct caagcaactg aaacaacaga agcttctcaa      360

tatggtccga accgcaatt taacaaaaca cctaagtatg tgaaatatag agatgctggt       420

acaggtattc gtgaatacaa cgatggaaca tttggatatg aagcgagacc aagattcaac      480

aagccatcag aaacaaacgc atacaacgta acgacaaatc aagatggcac agta            534
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<210>   2903
<211>   505
<212>   DNA
<213>   Staphylococcus aureus

<400>   2903
acaagagaag cagtagcaaa cgctgacgaa tcttggaaaa ctaaaactgt aaaaaaatac       60

ggtgaatctg aaacaaaatc tcctgttgta aagaagaga acaaagttga agaccctcaa        120

tcacctaaat ttgataacca acaagaggtt aaaactacgg ctggtaaagc tgaagaaaca       180

acacaaccag ttgcacaacc attagttaaa attccacagg cacaattac aggtgaaatt        240

gtgaaaggtc cggaatatcc aacgatggaa aataaaacgt acaaggtga atcgttcaa         300

ggtccagatt tcccaacaat ggaacaaagc ggtccatctt taagcgacaa ttatactcaa       360

ccgacgacac cgaaccctat tttagaaggt cttgaaggta gctcatctaa acttgaaata       420

aaaccacaag gtactgaatc aacgttgaaa ggtattcaag gagaatcaag tgatattgaa       480

gttaaacctc aagcaactga aacaa                                             505
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<210>   2904
<211>   523
<212>   DNA
<213>   Streptococcus dysgalactiae

<400>   2904
gacattgaga ttggtgatga ggatcgccga gggcttgaat tggcagcaga tattcgacaa        60

aaagacccca atgcggtcat tgtgtttgtt accacacatt ctgaatttgc tcctatttct       120

tttaaataca aagtgtctgc cttagatttt attgacaaag cagttgataa acaacaattt       180

agggatcaga ttgaagaatg tatccgctat acctatgaga tgatgtctag ccgagaatca       240
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gaagacatgt ttctatttga gaccccctcag acaaggttaa aattacctta caaagatatc      300

ctttatttttg ctactgctac gacaccccac aaggtgtgtt tgtggactca gacggagaga      360

ctggagtttt atggtaattt atctgagata caagctgtgg ctccaaagct tttcttatgc      420

catagatctt acttggttaa tctagataag gttgtgcgta ttgataaatc caaacagctc      480

ctctatttcg ataatgggga ttcctgtatg gtctcacgct taa                        523
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<210> 2905
<211> 287
<212> DNA
<213> Streptococcus dysgalactiae

<400> 2905
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tgttaatagt aaaatcttag atggtacttt aggcattgat ttcaagtcga tttcaaaagg      60

tgaaaagaag gtgatgattg cagcatacaa gcaaattttt tacaccgtat cagcaaacct     120

tcctaataat cctgcggatg tgtttgataa atcagtgacc tttaaagagt tgcaacgaaa     180

aggtgtcagc aatgaagccc cgccactctt tgtgagtaac gtagcttatg gtcgaactgt     240

ttttgtcaaa ctagaaacaa gttctaaaag taatgatgtt gaagcgg                   287
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<210> 2906
<211> 500
<212> DNA
<213> Staphylococcus hominis

<400> 2906
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atcgtgcttt cagttcattt cctgtcatcc atttatgatt tttaatgatt ttaccattct      60

ctttggattt gtaatcaact acgtaaacag tcgtctttttt cacgttatct atattggctg     120

tagcacctttt cataccagac atatgacttg cttctaattt aacagtatcg cccttactaa     180

atccatcttt aggtgcatct ttaatctctt cgtttacgac ccatttatga ttgcttactt     240

tttcatttcc atttgtgggt ttataactta caacataagc atatgtttta tacgcacctt     300

ttacagtagc ttctgcacct ttcatacctg gcatatgccc tgctgtaatc gttactttat     360

ctcctacttt aaattcaccc tcattagtcg atgtcatatc ttcaggaact ttactttcat     420

cattatgctt catatggctc tcactttttt ggtcattagt gtctttatct ttttcatcat     480

tattggagca agctgataat                                                   500
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<210> 2907
<211> 610

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<212>  DNA
<213>  Acinetobacter baumannii

<400>  2907
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caagtgcctg atgttctggt cagatacgaa aacagtttaa ttggccgcag taataaaaaa     120

ggccatattt ttgtgccatc ggtgacgcct tactattcgg gtaaatacag cgtcgaccca     180

atcgatttac cttcaaactt cactatcacg caagttgaac aacgtattgc tgctaaacgt     240

ggctcgggtg ttgtgattaa gttcccagtt catcagtcta tttccgcaaa tgtctatttg     300

actcaggcag atggcaaacc tgtgccggta ggggctgtag tacatagagc tgatcaagag     360

tcttcttatg tgggaatgga tggcattgtc tatttagaaa atttaaaacc gaataacacc     420

gtaacggttc agcgttcgga ccaaagtatt tgtaaagcag attttctgt  agatgtagaa     480

caagccaagc agcagattgt ggtggttaaa cctgttactt gtcacgaggt atctttgcca     540

tgaatataaa aacaaaaaaa ttactcagac atttatgcat gttctctgga ctgatgttga     600

cgggaaatat                                                            610


<210>  2908
<211>  516
<212>  DNA
<213>  Acinetobacter baumannii

<400>  2908
acggtatcga aagctgaaat gcagcactcc attcttttc gatgaaatca cggttggcac      60

ttaatgaaac agtcacacca ttcatataag tcggtaaaac aggcgcccaa gacaaattta     120

agaagcgatt tttaaagtca tttgccttgg tattgatata accgacgcca aaagttccag     180

agtttttggt cgcaaaataa gtattggccg ttaagctttt attgctattt actgaaatta     240

aattgctata ttgcagccgt gaaaggtcgg tatattcatc atcacgttgg ttatggttaa     300

tgctaaaacc aaaccgatta cggttatagc tgtatccaac tgtatattgg ttaccttcca     360

agtctttcgt tcgatcttca gacatagatt tgtcggcttt actttgggta aaagaggcac     420

tcagcacacc taaatttgca agcttgagta cagacccagc acccaataac tgtaaatctg     480

aagaaagctc ggtgcgtcct tctacagtca gccagt                               516


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<213>  synthetic construct
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<400> 2909
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<210> 2910
<211> 19
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<400> 2910
gctcgggacc tacgtatta   19

<210> 2911
<211> 25
<212> DNA
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<400> 2911
ggtaccaagt atgatatgga tatgg   25

<210> 2912
<211> 20
<212> DNA
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<400> 2912
ctgaattttg gagcaaaacc   20

<210> 2913
<211> 20
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<400> 2913
cttatcgaaa cgcttacgtc   20

<210> 2914
<211> 20
<212> DNA
<213> synthetic construct

<400> 2914
ataaagtcat taggccggta   20

<210> 2915
<211> 21
<212> DNA
<213> synthetic construct

<400> 2915

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cacagcaaca aactactcaa a                                          21


<210>  2916
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<213>  synthetic construct

<400>  2916
gctgcttggt ctgaaagtaa                                            20


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tgagtattcc caaaattgct                                            20


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<400>  2918
gcatgagttg ttcaagtgg                                             19


<210>  2919
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<400>  2919
gcacattggg ataatgagac                                            20


<210>  2920
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<400>  2920
tgaacatagt ttgcaccaag                                            20


<210>  2921
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<400>  2921
tgtatctcga tttggttgtg                                            20
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<400>    2922
caaactgcca agatgtgtc                                                    19


<210>    2923
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tcacttgtta cacctgtgat g                                                 21


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ttgttgatta ttgcgaactg                                                   20


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<400>    2925
attgatcgaa atcaccaaaa                                                   20


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<400>    2926
ccatgagtct ttacccaaaa                                                   20


<210>    2927
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<400>    2927
gcactggttg aaactgaact                                                   20


<210>    2928
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atactttggc ccatacttct ac                                            22


<210>   2929
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<400>   2929
gctatctgtt agtcaattta tatatgc                                       27


<210>   2930
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ataaattccg gccgtatg                                                 18


<210>   2931
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<400>   2931
atatgaaaaa cattcagaaa tcac                                          24


<210>   2932
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<400>   2932
agagtatctt tataatcgcc ttg                                           23


<210>   2933
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<400>   2933
tttaaatgga gggaagatga                                               20


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<212>   DNA
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catcatgggt tgcttgac                                                   18


<210>  2935
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gcttccttac gttcctctg                                                  19


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<400>  2936
ttggtttgca gttgatattg                                                 20


<210>  2937
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<400>  2937
taggtaatgc tggtgttgg                                                  19


<210>  2938
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<400>  2938
gacggttcat agcacgac                                                   18


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atgcctattt ccaatcaaga                                      20


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gcaatgcttc ctgacatt                                        18


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agatggatgt tgatgctctt                                      20


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gagttcaagt actcagcttc ataa                                 24


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gatgaatacc gcccattac                                       19


<210>  2946
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gcgcttgcaa actaactg                                               18


<210>   2949
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ttaaacgtct tgccgatg                                               18


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taaacgatag tcacgctctg                                             20


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cgacgcttta tctcttcgt                                              19


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gtacggctac cagtgattgt                                             20
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cgctttctcg tagcatcg                                              18


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gtgaaggcat gagtgttatt c                                          21


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gctatctacg gttcgctct                                             19


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tcagtgtatt aagcattcaa cc                                         22


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ataattcgcc gctttgtag                                             19


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atggaagggt taggcatc                                                          18


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tcagtgtatt aagcattcaa cc                                                     22


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ataattcgcc gctttgtag                                                         19


<210>   2963
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<400>   2963
tcagtgtatt aagcattcaa cc                                                     22


<210>   2964
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<400>   2964
ataattcgcc gctttgtag                                                         19


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tgccaattaa cttcttagcc                                            20


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acaacagcaa gacctaaacc                                            20


<210>  2967
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attcctgcag ttcagtgg                                              18


<210>  2968
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ggtctggttg tcgatgag                                              18


<210>  2969
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<400>  2969
cagccacact actttacctt c                                          21


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gccatatcct tcacgttagt                                            20


<210>  2971
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cattagccag catgtgaaa                                                19


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<400>  2972
ggacgaatca aataccatca                                               20


<210>  2973
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<400>  2973
gcatctcttg ctctgctc                                                 18


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<400>  2974
gcacgttaat ccaggtatg                                                19


<210>  2975
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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ANALYTICAL DEVICE FOR RAPID IDENTIFICATION OF PATHOGENS

(57) Abstract: DNA microarray for rapid identification of candida albicans in blood cultures.

WO 2007/039319 A3

INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
INV. C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, EMBASE, MEDLINE, PAJ, WPI Data, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	NAKAMURA M ET AL: "DEVELOPMENT OF THE DNA MICRO ARRAY FOR IDENTIFICATION OF INFECTIOUS DISEASE CAUSACTIVE BACTERIA IN HUMAN" 18 May 2003 (2003-05-18), ABSTRACTS OF THE GENERAL MEETING OF THE AMERICAN SOCIETY FOR MICROBIOLOGY, THE SOCIETY, WASHINGTON, DC, US, PAGE(S) ABSTRNOC219 , XP008047725 ISSN: 1060-2011 abstract _____ -/--	1-8, 10-25

[X] Further documents are listed in the continuation of Box C.   [X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
5 July 2007	26/07/2007

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Helliot, Bertrand

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Form PCT/ISA/210 (second sheet) (April 2005)

International application No

PCT/EP2006/010132

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WANG R-F ET AL: "DNA microarray analysis of predominant human intestinal bacteria in fecal samples" August 2004 (2004-08), MOLECULAR AND CELLULAR PROBES, ACADEMIC PRESS, LONDON, GB, PAGE(S) 223-234 , XP004522575 ISSN: 0890-8508 abstract; tables 1,2 -----	1-8, 10-25
A	LEHNER A ET AL: "Oligonucleotide microarray for identification of Enterococcus species" 1 May 2005 (2005-05-01), FEMS MICROBIOLOGY LETTERS, AMSTERDAM, NL, PAGE(S) 133-142 , XP004876200 ISSN: 0378-1097 abstract -----	1-8, 10-25
X	EP 1 310 569 A (PRESIDENT OF GIFU UNIVERSITY) 14 May 2003 (2003-05-14) claim 14 -----	1-6, 10-13, 15,19-25
X	WO 92/07096 A (MICROPROBE CORPORATION) 30 April 1992 (1992-04-30) page 12, paragraph 2 page 27, paragraph 2 example 6 -----	1-6,10, 12,13
X	US 6 747 137 B1 (WEINSTOCK KEITH G [US] ET AL) 8 June 2004 (2004-06-08) column 2, lines 41-47 column 16, lines 55-60 column 19, lines 43-61 column 42, lines 5-43 table 2 claim 7 -----	1-6,10, 12,13, 19-25
X	EP 1 344 833 A (CHIP BIOTECHNOLOGY INC DR [TW]) 17 September 2003 (2003-09-17)	1-6, 10-13, 15,16, 18-25
Y	page 2, paragraphs 8,10 page 3, paragraphs 13,18,19 examples 1,2 claim 8 -----	7,14,17
Y	US 6 008 341 A1 (FOSTER TIMOTHY JAMES [IE] ET AL) 28 December 1999 (1999-12-28) figure 2 -----	7,14,17

-/--

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INTERNATIONAL SEARCH REPORT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/094868 A (CHIRON SPA [IT]; MASIGNANI VEGA [IT]; MORA MARIROSA [IT]; SCARSELLI MA) 28 November 2002 (2002-11-28) page 2, lines 12,13 page 2, lines 20-25 sequences 1992,3983	1-8, 10-15

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2006/010132

Box II   Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III   Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

   1-4 (totally), 5-8, 10-18 (partially), 19-25

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest   ☒ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet (2)) (January 2004)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: claims 1-7 and 10-25 (partially)

An analytical device for direct identification and characterisation of microoragnisms in a sample or clinical specimen, wherein the device comprises species specific gene probes of at least 100 nucleotides, and in particular a device for Staphylococcus species identification, in particular for S. aureus identification, wherein, in this case, the microarray comprises the gene probe listed as SEQ ID N° 3 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus aureus in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus aureus in a sample or clinical specimen.

Inventions 2-176: claims 1-25 (partially)

An analytical device for direct identification and characterisation of Staphylococcus aureus in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° SEQ ID N° 1-2, 4-141, 790, 798, 801, 802, 808, 812, 814, 818, 825, 827, 837, 840, 843, 844, 846, 848-852, 854, 855, 859, 862, 875, 885, 896, 897, 904, 907, 908, 935, 942, 2902, 2903, and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Staphylococcus aureus in a sample or in a clinical specimen.
A kit for the detection of Staphylococcus aureus in a sample or clinical specimen.

Inventions 177-220: claims 1-6, 8-25 (partially)

An analytical device for direct identification and characterisation of E. coli in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 142-173, 815, 833, 834, 836, 839, 857, 860, 886-887, 895, 901, 906, and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of E. coli in a sample or in a clinical specimen.

Inventions 221-258: claims 1-6, 8-25 (partially)

An analytical device for direct identification and
characterisation of Staphylococcus epidermis in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 174-208,786, 806, 826
and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Staphylococcus epidermis in a sample or in a clinical
specimen.
A kit for the detection of Staphylococcus epidermis in a
sample or clinical specimen.

———

Inventions 259-269: claims 1-6, 8-25 (partially)

An analytical device for direct identification and
characterisation of Staphylococcus haemoliyticus in a sample
or clinical specimen, wherein the microarray comprises one
of the gene probes listed as SEQ ID N° 209-215, 796, 803,
820, 938 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Staphylococcus haemoliyticus in a sample or in a clinical
specimen.
A kit for the detection of Staphylococcus haemoliyticus in a
sample or clinical specimen.

———

Inventions 270-276: claims 1-6, 8-25 (partially)

An analytical device for direct identification and
characterisation of Staphylococcus lugdunensis in a sample
or clinical specimen, wherein the microarray comprises one
of the gene probes listed as SEQ ID N° 216-221, 888 and
having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Staphylococcus lugdunensis in a sample or in a clinical
specimen.
A kit for the detection of Staphylococcus lugdunensis in a
sample or clinical specimen.

———

Inventions 277-284: claims 1-6, 8-25 (partially)

FURTHER INFORMATION CONTINUED FROM   PCT/ISA/ 210

An analytical device for direct identification and
characterisation of Staphylococcus warneri in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 224-230, 831 and having
a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Staphylococcus warneri in a sample or in a clinical
specimen.
A kit for the detection of Staphylococcus warneri in a
sample or clinical specimen.

Inventions 285-286: claims 1-6, 8-25 (partially)

An analytical device for direct identification and
characterisation of Staphylococcus saprophyticus in a sample
or clinical specimen, wherein the microarray comprises one
of the gene probes listed as SEQ ID N° 222-223 and having a
length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Staphylococcus saprophyticus in a sample or in a clinical
specimen.
A kit for the detection of Staphylococcus saprophyticus in a
sample or clinical specimen.

Inventions 287-375: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and
characterisation of Streptococcus pneumoniae in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N°523-605, 793, 805, 807,
813, 858, 929 and having a length of at least 100
nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Streptococcus pneumoniae in a sample or in a clinical
specimen.
A kit for the detection of Streptococcus pneumoniae in a
sample or clinical specimen.

Inventions 376-420: claims 1-4, 6, 11-12, 14-25 (partially)

FURTHER INFORMATION CONTINUED FROM   PCT/ISA/ 210

An analytical device for direct identification and
characterisation of Streptococcus pyogenes in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 645-686, 800, 856, 928
and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Streptococcus pyogenes in a sample or in a clinical
specimen.
A kit for the detection of Streptococcus pyogenes in a
sample or clinical specimen.

Inventions 421-477: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and
characterisation of Klebsiella pneumoniae in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 399-448, 792, 794, 829,
899, 902, 903, 934 and having a length of at least 100
nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Klebsiella pneumoniae in a sample or in a clinical
specimen.
A kit for the detection of Klebsiella pneumoniae in a sample
or clinical specimen.

Inventions 478-504: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and
characterisation of Klebsiella oxytoca in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 449-469, 789, 799, 816,
822, 898, 943 and having a length of at least 100
nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Klebsiella oxytoca in a sample or in a clinical specimen.
A kit for the detection of Klebsiella oxytoca in a sample or
clinical specimen.

Inventions 505-571: claims 1-4, 6, 11-12, 13-25 (partially)

FURTHER INFORMATION CONTINUED FROM   PCT/ISA/ 210

An analytical device for direct identification and
characterisation of Pseudomonas aeruginosa in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 470-522, 785, 787, 791,
797, 804, 821, 832, 838, 841, 842, 884, 889, 905, 926 and
having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Pseudomonas aeruginosa in a sample or in a clinical
specimen.
A kit for the detection of Pseudomonas aeruginosa in a
sample or clinical specimen.

Inventions 572-611: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and
characterisation of Streptococcus agalactiae in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 606-644, 930 and having
a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Streptococcus agalactiae in a sample or in a clinical
specimen.
A kit for the detection of Streptococcus agalactiae in a
sample or clinical specimen.

Invention 612: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and
characterisation of Streptococcus mutans in a sample or
clinical specimen, wherein the microarray comprises the gene
probe listed as SEQ ID N° 894 and having a length of at
least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Streptococcus mutans in a sample or in a clinical
specimen.
A kit for the detection of Streptococcus mutans in a sample
or clinical specimen.

Inventions 613-633: claims 1-4, 6, 8, 10-25 (partially)

An analytical device for direct identification and
characterisation of Enterococcus faecalis in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 308-398, 809, 811, 835,
864, 865, 880, 891, 909, 933, 936 and having a length of at
least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Enterococcus faecalis in a sample or in a clinical
specimen.
A kit for the detection of Enterococcus faecalis in a sample
or clinical specimen.

Inventions 634-659: claims 1-4, 6, 8, 10-25 (partially)

An analytical device for direct identification and
characterisation of Enterococcus faecuim in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 810, 817, 824, 847, 853,
861, 866-874, 876-879, 882, 900, 927, 931, 932, 939, 2887
and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Enterococcus faecuim in a sample or in a clinical
specimen.
A kit for the detection of Enterococcus faecuim in a sample
or clinical specimen.

Inventions 660-736: claims 1-4, 6, 11-25 (partially)

An analytical device for direct identification and
characterisation of Proteus mirabilis in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 706-775, 788, 830, 863,
883, 890, 892, 940 and having a length of at least 100
nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Proteus mirabilis in a sample or in a clinical specimen.
A kit for the detection of Proteus mirabilis in a sample or
clinical specimen.

Inventions 737-749: claims 1-4, 6, 11-25 (partially)

An analytical device for direct identification and
characterisation of Proteus vulgaris in a sample or clinical
specimen, wherein the microarray comprises one of the gene
probes listed as SEQ ID N° 776-784, 819, 823, 893, 941 and
having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Proteus vulgaris in a sample or in a clinical specimen.
A kit for the detection of Proteus vulgaris in a sample or
clinical specimen.

Inventions 750-835: claims 1-6, 8-25 (partially)

An analytical device for direct identification and
characterisation of Candida albicans in a sample or clinical
specimen, wherein the microarray comprises one of the gene
probes listed as SEQ ID N° 231-307, 910-918 and having a
length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Candida albicans in a sample or in a clinical specimen.
A kit for the detection of Candida albicans in a sample or
clinical specimen.

Inventions 836-864: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and
characterisation of Acinetobacter baumanii in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 2843-2863, 2865, 2866,
2868-2870, 2888, 2907, 2908 and having a length of at least
100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Acinetobacter baumanii in a sample or in a clinical
specimen.
A kit for the detection of Acinetobacter baumanii in a
sample or clinical specimen.

Inventions 865-883: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and
characterisation of Streptococcus viridans in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 687-705 and having a
length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Streptococcus viridans in a sample or in a clinical
specimen.
A kit for the detection of Streptococcus viridans in a
sample or clinical specimen.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Invention 884:   claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and
characterisation of Salmonella typhimurium in a sample or
clinical specimen, wherein the microarray comprises the gene
probe listed as SEQ ID N° 795 and having a length of at
least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Salmonella typhimurium in a sample or in a clinical
specimen.
A kit for the detection of Salmonella typhimurium in a
sample or clinical specimen.

Invention 885: claims 1-4, 8, 10-13, 15-25 (partially)

An analytical device for direct identification and
characterisation of Enterococcus flavescens in a sample or
clinical specimen, wherein the microarray comprises the gene
probe listed as SEQ ID N° 881 and having a length of at
least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Enterococcus flavescens in a sample or in a clinical
specimen.
A kit for the detection of Enterococcus flavescens in a
sample or clinical specimen.

Inventions 886-887: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and
characterisation of Staphilococcus hominis in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 937, 2906 and having a
length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Staphilococcus hominis in a sample or in a clinical
specimen.
A kit for the detection of Staphilococcus hominis in a
sample.

Inventions 888-889: claims 1-4, 11-12, 15-25 (partially)

FURTHER INFORMATION CONTINUED FROM   PCT/ISA/ 210

An analytical device for direct identification and
characterisation of Stenotrophomonas maltophilia in a sample
or clinical specimen, wherein the microarray comprises one
of the gene probes listed as SEQ ID N° 2871, 2875, 2889-2901
and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Stenotrophomonas maltophilia in a sample or in a
clinical specimen.
A kit for the detection of Stenotrophomonas maltophilia in
a sample or clinical specimen.

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(81) **Designated States** *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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see Notice of 20 March 2008

(54) **Title:** DNA MICROARRAY FOR RAPID IDENTIFICATION OF CANDIDA ALBICANS IN BLOOD CULTURES

(57) **Abstract:** DNA microarray for rapid identification of candida albicans in blood cultures.

| REVISED VERSION | INTERNATIONAL SEARCH REPORT | International application No |
| | | PCT/EP2006/010132 |

A. CLASSIFICATION OF SUBJECT MATTER
INV. C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, EMBASE, MEDLINE, PAJ, WPI Data, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	NAKAMURA M ET AL: "DEVELOPMENT OF THE DNA MICRO ARRAY FOR IDENTIFICATION OF INFECTIOUS DISEASE CAUSACTIVE BACTERIA IN HUMAN" 18 May 2003 (2003-05-18), ABSTRACTS OF THE GENERAL MEETING OF THE AMERICAN SOCIETY FOR MICROBIOLOGY, THE SOCIETY, WASHINGTON, DC, US, PAGE(S) ABSTRNOC219 , XP008047725 ISSN: 1060-2011 abstract -/--	1-8, 10-25

[X] Further documents are listed in the continuation of Box C.   [X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
5 July 2007	21. 12. 2007

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Helliot, Bertrand

Form PCT/ISA/210 (second sheet) (April 2005)

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WANG R-F ET AL: "DNA microarray analysis of predominant human intestinal bacteria in fecal samples" August 2004 (2004-08), MOLECULAR AND CELLULAR PROBES, ACADEMIC PRESS, LONDON, GB, PAGE(S) 223-234 , XP004522575 ISSN: 0890-8508 abstract; tables 1,2 -----	1-8, 10-25
A	LEHNER A ET AL: "Oligonucleotide microarray for identification of Enterococcus species" 1 May 2005 (2005-05-01), FEMS MICROBIOLOGY LETTERS, AMSTERDAM, NL, PAGE(S) 133-142 , XP004876200 ISSN: 0378-1097 abstract -----	1-8, 10-25
X	EP 1 310 569 A (PRESIDENT OF GIFU UNIVERSITY) 14 May 2003 (2003-05-14) claim 14 -----	1-6, 10-13, 15,19-25
X	WO 92/07096 A (MICROPROBE CORPORATION) 30 April 1992 (1992-04-30) page 12, paragraph 2 page 27, paragraph 2 example 6 -----	1-6,10, 12,13
X	US 6 747 137 B1 (WEINSTOCK KEITH G [US] ET AL) 8 June 2004 (2004-06-08) column 2, lines 41-47 column 16, lines 55-60 column 19, lines 43-61 column 42, lines 5-43 table 2 claim 7 -----	1-6,10, 12,13, 19-25
X	EP 1 344 833 A (CHIP BIOTECHNOLOGY INC DR [TW]) 17 September 2003 (2003-09-17) 	1-6, 10-13, 15,16, 18-25
Y	page 2, paragraphs 8,10 page 3, paragraphs 13,18,19 examples 1,2 claim 8 -----	7,14,17
Y	US 6 008 341 A1 (FOSTER TIMOTHY JAMES [IE] ET AL) 28 December 1999 (1999-12-28) figure 2 -----	7,14,17

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INTERNATIONAL SEARCH REPORT

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/094868 A (CHIRON SPA [IT]; MASIGNANI VEGA [IT]; MORA MARIROSA [IT]; SCARSELLI MA) 28 November 2002 (2002-11-28) page 2, lines 12,13 page 2, lines 20-25 sequences 1992,3983 -----	1-8, 10-15

INTERNATIONAL SEARCH REPORT

Box No. II	Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III	Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☒ As only some of the required additional search fees were timely paid by the applicant, this international search reportcovers only those claims for which fees were paid, specifically claims Nos.:

1-4 (totally), 5-8, 10-18 (partially), 19-25

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☒ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM   PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: claims 1-7 and 10-25 (partially)

> An analytical device for direct identification and characterisation of microoragnisms in a sample or clinical specimen, wherein the device comprises species specific gene probes of at least 100 nucleotides, and in particular a device for Staphylococcus species identification, in particular for S. aureus identification, wherein, in this case, the microarray comprises the gene probe listed as SEQ ID N° 3 and having a length of at least 100 nucleotides.
> Use of the analytical device.
> An in vitro method for identification and characterisation of Staphylococcus aureus in a sample or in a clinical specimen.
> A kit for the detection of Staphylococcus aureus in a sample or clinical specimen.

> ---

Inventions 2-176: claims 1-25 (partially)

> An analytical device for direct identification and characterisation of Staphylococcus aureus in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° SEQ ID N° 1-2, 4-141, 790, 798, 801, 802, 808, 812, 814, 818, 825, 827, 837, 840, 843, 844, 846, 848-852, 854, 855, 859, 862, 875, 885, 896, 897, 904, 907, 908, 935, 942, 2902, 2903, and having a length of at least 100 nucleotides.
> Use of the analytical device.
> An in vitro method for identification and characterisation of Staphylococcus aureus in a sample or in a clinical specimen.
> A kit for the detection of Staphylococcus aureus in a sample or clinical specimen.

> ---

Inventions 177-220: claims 1-6, 8-25 (partially)

> An analytical device for direct identification and characterisation of E. coli in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 142-173, 815, 833, 834, 836, 839, 857, 860, 886-887, 895, 901, 906, and having a length of at least 100 nucleotides.
> Use of the analytical device.
> An in vitro method for identification and characterisation of E. coli in a sample or in a clinical specimen.

> ---

Inventions 221-258: claims 1-6, 8-25 (partially)

An analytical device for direct identification and
characterisation of Staphylococcus epidermis in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 174-208,786, 806, 826
and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Staphylococcus epidermis in a sample or in a clinical
specimen.
A kit for the detection of Staphylococcus epidermis in a
sample or clinical specimen.

Inventions 259-269: claims 1-6, 8-25 (partially)

An analytical device for direct identification and
characterisation of Staphylococcus haemoliyticus in a sample
or clinical specimen, wherein the microarray comprises one
of the gene probes listed as SEQ ID N° 209-215, 796, 803,
820, 938 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Staphylococcus haemoliyticus in a sample or in a clinical
specimen.
A kit for the detection of Staphylococcus haemoliyticus in a
sample or clinical specimen.

Inventions 270-276: claims 1-6, 8-25 (partially)

An analytical device for direct identification and
characterisation of Staphylococcus lugdunensis in a sample
or clinical specimen, wherein the microarray comprises one
of the gene probes listed as SEQ ID N° 216-221, 888 and
having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Staphylococcus lugdunensis in a sample or in a clinical
specimen.
A kit for the detection of Staphylococcus lugdunensis in a
sample or clinical specimen.

Inventions 277-284: claims 1-6, 8-25 (partially)

FURTHER INFORMATION CONTINUED FROM   PCT/ISA/ 210

An analytical device for direct identification and
characterisation of Staphylococcus warneri in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 224-230, 831 and having
a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Staphylococcus warneri in a sample or in a clinical
specimen.
A kit for the detection of Staphylococcus warneri in a
sample or clinical specimen.

Inventions 285-286: claims 1-6, 8-25 (partially)

An analytical device for direct identification and
characterisation of Staphylococcus saprophyticus in a sample
or clinical specimen, wherein the microarray comprises one
of the gene probes listed as SEQ ID N° 222-223 and having a
length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Staphylococcus saprophyticus in a sample or in a clinical
specimen.
A kit for the detection of Staphylococcus saprophyticus in a
sample or clinical specimen.

Inventions 287-375: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and
characterisation of Streptococcus pneumoniae in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N°523-605, 793, 805, 807,
813, 858, 929 and having a length of at least 100
nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Streptococcus pneumoniae in a sample or in a clinical
specimen.
A kit for the detection of Streptococcus pneumoniae in a
sample or clinical specimen.

Inventions 376-420: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and
characterisation of Streptococcus pyogenes in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 645-686, 800, 856, 928
and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Streptococcus pyogenes in a sample or in a clinical
specimen.
A kit for the detection of Streptococcus pyogenes in a
sample or clinical specimen.

Inventions 421-477: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and
characterisation of Klebsiella pneumoniae in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 399-448, 792, 794, 829,
899, 902, 903, 934 and having a length of at least 100
nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Klebsiella pneumoniae in a sample or in a clinical
specimen.
A kit for the detection of Klebsiella pneumoniae in a sample
or clinical specimen.

Inventions 478-504: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and
characterisation of Klebsiella oxytoca in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 449-469, 789, 799, 816,
822, 898, 943 and having a length of at least 100
nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Klebsiella oxytoca in a sample or in a clinical specimen.
A kit for the detection of Klebsiella oxytoca in a sample or
clinical specimen.

Inventions 505-571: claims 1-4, 6, 11-12, 13-25 (partially)

An analytical device for direct identification and characterisation of Pseudomonas aeruginosa in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 470-522, 785, 787, 791, 797, 804, 821, 832, 838, 841, 842, 884, 889, 905, 926 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Pseudomonas aeruginosa in a sample or in a clinical specimen.
A kit for the detection of Pseudomonas aeruginosa in a sample or clinical specimen.

Inventions 572-611: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of Streptococcus agalactiae in a sample or clinical specimen, wherein the microarray comprises one of the gene probes listed as SEQ ID N° 606-644, 930 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Streptococcus agalactiae in a sample or in a clinical specimen.
A kit for the detection of Streptococcus agalactiae in a sample or clinical specimen.

Invention 612: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and characterisation of Streptococcus mutans in a sample or clinical specimen, wherein the microarray comprises the gene probe listed as SEQ ID N° 894 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation of Streptococcus mutans in a sample or in a clinical specimen.
A kit for the detection of Streptococcus mutans in a sample or clinical specimen.

Inventions 613-633: claims 1-4, 6, 8, 10-25 (partially)

FURTHER INFORMATION CONTINUED FROM   PCT/ISA/ 210

An analytical device for direct identification and
characterisation of Enterococcus faecalis in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 308-398, 809, 811, 835,
864, 865, 880, 891, 909, 933, 936 and having a length of at
least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Enterococcus faecalis in a sample or in a clinical
specimen.
A kit for the detection of Enterococcus faecalis in a sample
or clinical specimen.

Inventions 634-659: claims 1-4, 6, 8, 10-25 (partially)

An analytical device for direct identification and
characterisation of Enterococcus faecuim in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 810, 817, 824, 847, 853,
861, 866-874, 876-879, 882, 900, 927, 931, 932, 939, 2887
and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Enterococcus faecuim in a sample or in a clinical
specimen.
A kit for the detection of Enterococcus faecuim in a sample
or clinical specimen.

Inventions 660-736: claims 1-4, 6, 11-25 (partially)

An analytical device for direct identification and
characterisation of Proteus mirabilis in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 706-775, 788, 830, 863,
883, 890, 892, 940 and having a length of at least 100
nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Proteus mirabilis in a sample or in a clinical specimen.
A kit for the detection of Proteus mirabilis in a sample or
clinical specimen.

Inventions 737-749: claims 1-4, 6, 11-25 (partially)

FURTHER INFORMATION CONTINUED FROM   PCT/ISA/ 210

An analytical device for direct identification and
characterisation of Proteus vulgaris in a sample or clinical
specimen, wherein the microarray comprises one of the gene
probes listed as SEQ ID N° 776-784, 819, 823, 893, 941 and
having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Proteus vulgaris in a sample or in a clinical specimen.
A kit for the detection of Proteus vulgaris in a sample or
clinical specimen.

Inventions 750-835: claims 1-6, 8-25 (partially)

An analytical device for direct identification and
characterisation of Candida albicans in a sample or clinical
specimen, wherein the microarray comprises one of the gene
probes listed as SEQ ID N° 231-307, 910-918 and having a
length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Candida albicans in a sample or in a clinical specimen.
A kit for the detection of Candida albicans in a sample or
clinical specimen.

Inventions 836-864: claims 1-4, 6, 11-12, 14-25 (partially)

An analytical device for direct identification and
characterisation of Acinetobacter baumanii in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 2843-2863, 2865, 2866,
2868-2870, 2888, 2907, 2908 and having a length of at least
100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Acinetobacter baumanii in a sample or in a clinical
specimen.
A kit for the detection of Acinetobacter baumanii in a
sample or clinical specimen.

Inventions 865-883: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and
characterisation of Streptococcus viridans in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 687-705 and having a
length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Streptococcus viridans in a sample or in a clinical
specimen.
A kit for the detection of Streptococcus viridans in a
sample or clinical specimen.

Invention 884: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and
characterisation of Salmonella typhimurium in a sample or
clinical specimen, wherein the microarray comprises the gene
probe listed as SEQ ID N° 795 and having a length of at
least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Salmonella typhimurium in a sample or in a clinical
specimen.
A kit for the detection of Salmonella typhimurium in a
sample or clinical specimen.

Invention 885: claims 1-4, 8, 10-13, 15-25 (partially)

An analytical device for direct identification and
characterisation of Enterococcus flavescens in a sample or
clinical specimen, wherein the microarray comprises the gene
probe listed as SEQ ID N° 881 and having a length of at
least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Enterococcus flavescens in a sample or in a clinical
specimen.
A kit for the detection of Enterococcus flavescens in a
sample or clinical specimen.

Inventions 886-887: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and
characterisation of Staphilococcus hominis in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 937, 2906 and having a
length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Staphilococcus hominis in a sample or in a clinical
specimen.
A kit for the detection of Staphilococcus hominis in a
sample.

Inventions 888-889: claims 1-4, 11-12, 15-25 (partially)

FURTHER INFORMATION CONTINUED FROM   PCT/ISA/ 210

An analytical device for direct identification and
characterisation of Dictyostelium discoideum in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 945, 947 and having a
length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Dictyostelium discoideum in a sample or in a clinical
specimen.
A kit for the detection of Dictyostelium discoideum in a
sample or clinical specimen.

Inventions 890-892: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and
characterisation of Streptococcus dysgalactiae in a sample
or clinical specimen, wherein the microarray comprises one
of the gene probes listed as SEQ ID N° 2842, 2904, 2905 and
having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Streptococcus dysgalactiae in a sample or in a clinical
specimen.
A kit for the detection of Streptococcus dysgalactiae in a
sample or clinical specimen.

Inventions 893-907: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and
characterisation of Enterobacter cloacae in a sample or
clinical specimen, wherein the microarray comprises one of
the gene probes listed as SEQ ID N° 2864, 2967, 2872-2874,
2876-2886 and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Enterobacter cloacae in a sample or in a clinical
specimen.
A kit for the detection of Enterobacter cloacae in a sample
or clini

Inventions 908-922: claims 1-4, 11-12, 15-25 (partially)

An analytical device for direct identification and
characterisation of Stenotrophomonas maltophilia in a sample
or clinical specimen, wherein the microarray comprises one
of the gene probes listed as SEQ ID N° 2871, 2875, 2889-2901
and having a length of at least 100 nucleotides.
Use of the analytical device.
An in vitro method for identification and characterisation
of Stenotrophomonas maltophilia in a sample or in a
clinical specimen.
A kit for the detection of Stenotrophomonas maltophilia in
a sample or clinical specimen.

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